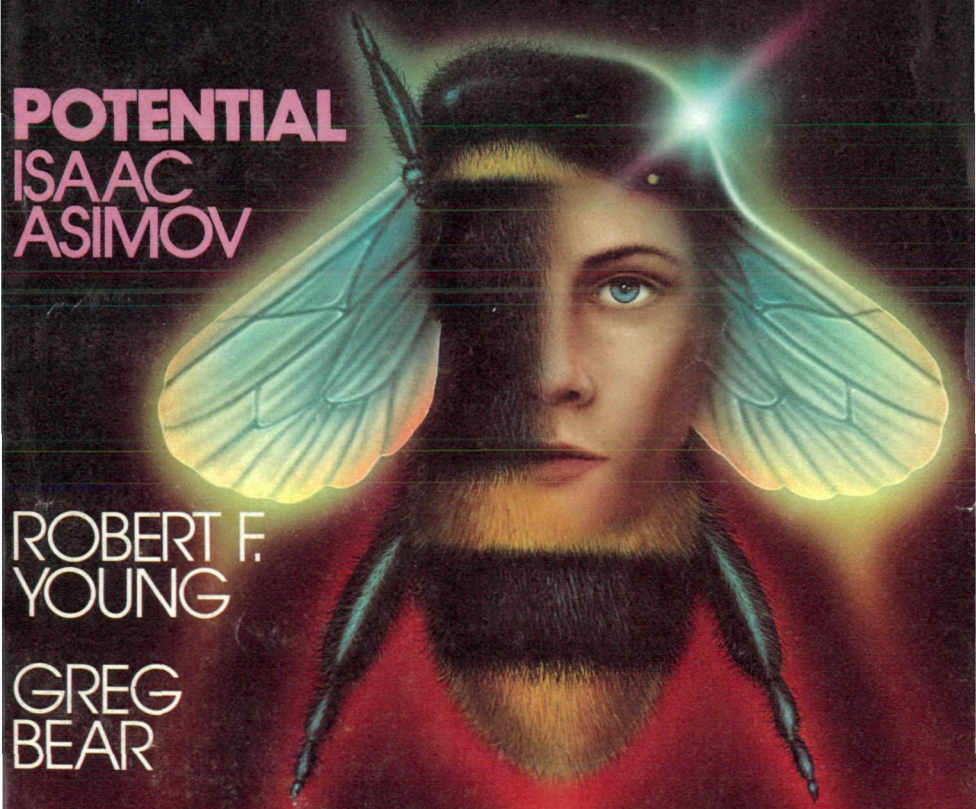
# Isaac ASIMOV'S SCIENCE FICTION MAGAZINE

1.75 FEBRUARY 1983



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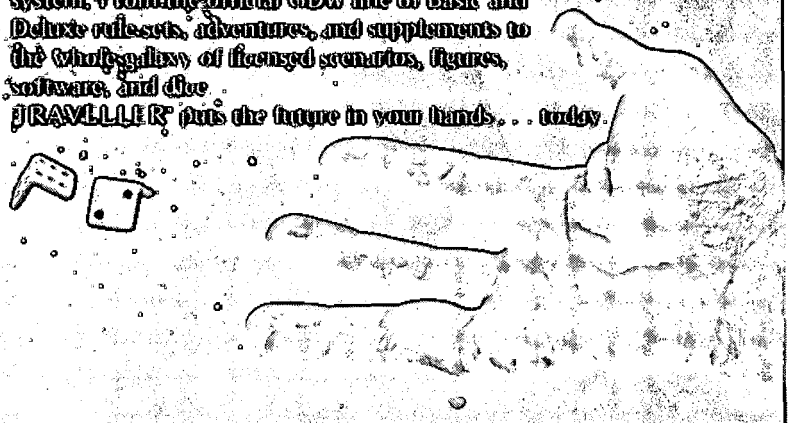

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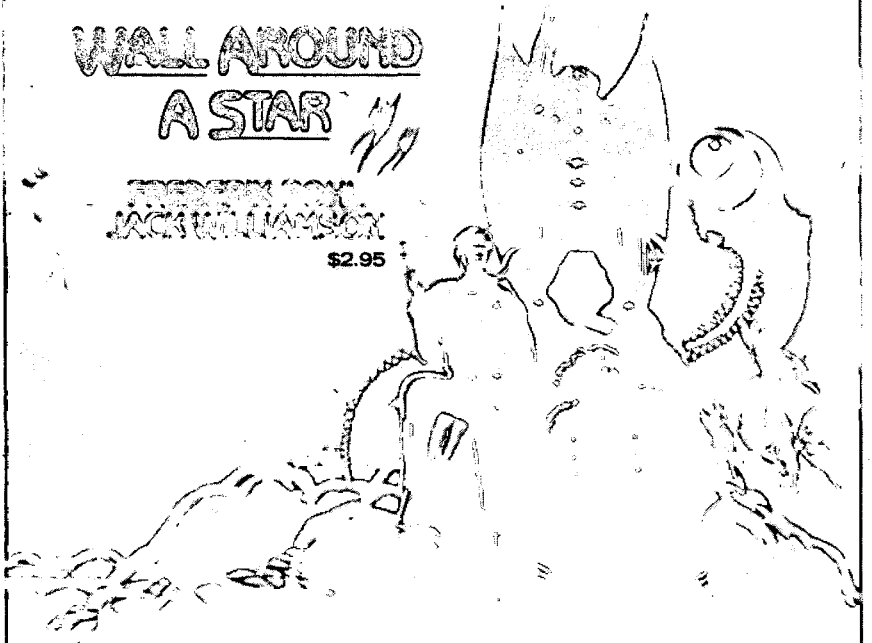

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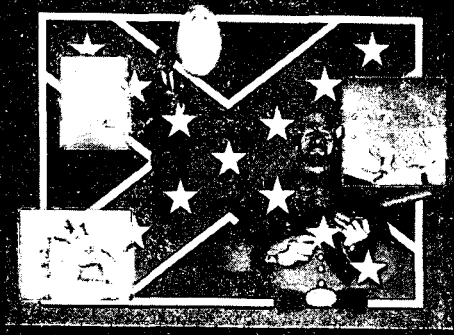

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# EDITORIAL

by Isaac Asimov

## MORE ASIMOV?

Every once in a while, we receive a letter that contains a sentence something like this: "Another thing that I'm curious about is why, since it is *Isaac Asimov's Science Fiction Magazine*, Isaac Asimov doesn't appear more often in the magazine."

Of course, I *do* appear in every issue with an editorial, but apparently that is not enough for them, . What the letter-writers are after is my science fiction.

One answer to this question is that you can't really go by the title. That just means that the magazine is put together in the spirit of Isaac Asimov, and need not necessarily contain my stories. Ellery Queen appeared in the magazine that carries his name even more rarely than I appear in "my" magazine, and Alfred Hitchcock never appeared in his magazine at all, even when he was alive.

Somehow, though, I have a feeling that this sort of argument cuts no ice. I can almost hear my loyal readers telling me that they're not interested in other magazines, only in this one.

What's more, Shawna McCarthy and Joel Davis are totally on the side of those particular readers who want more Asimov. (I say "those particular readers" because I don't want to imply that this is a unanimous demand.) They would like to have something by me in every issue, and they don't mean the editorial, either.

So how about it, Isaac?

I have no objection to thinking aloud on this subject. We're all friends, and I would like to thrash out the problem as well as I can and to solicit your opinions on the matter.

The points in favor of "more Asimov" are strong ones. I like to please the readers if I can, for one thing. Then, too, I have a feeling that life will become difficult for me if I don't make at least an honest effort to please Shawna and Joel, for although both of them are kindly people who show every sign of being fond of me, they get a kind of chilled-steel look in their eyes, at times, that im-



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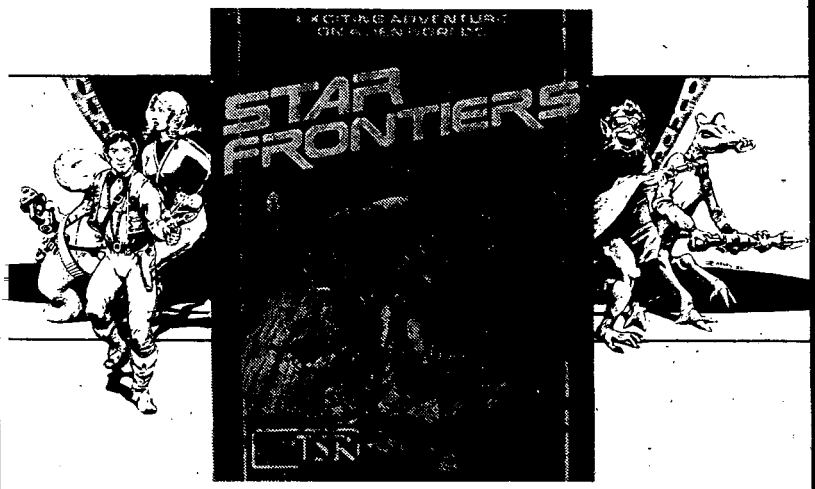


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parts a definite chatter to my teeth.

What's more, I would be an obvious hypocrite if I tried to pretend that I didn't know I was a good writer. And since I do write good science fiction, even now in my late youth, what right have I to deprive the magazine, and its readers, of this writing?

With all that, can there possibly be any arguments against what demand there is for "more Asimov"?

Absolutely!

1) I feel more than a little nervous about using my magazine as a showcase for myself. I won't really be doing so, of course, for Shawna is perfectly capable of rejecting any story of mine that doesn't pass muster. As I've said on a number of occasions, *Asimov's* has, in the past, firmly rejected an occasional story of mine — something which always strikes my friends as hilarious when I tell them about it.

"Do you mean to say even your own magazine won't print your stories?" they ask in delight.

And I have to explain to them that it's not really my own magazine and that the editor has a higher duty than that of pleasing me—but they're usually too busy laughing to listen.

The trouble is that even though the magazine is not a showplace for me, it might *look* like one. For instance, the special Foundation issue bothered me. It contained not only the first two chapters of the novel but also a lot of talk about it, and it certainly looked as if I were drumming up business for the book. Still, everyone was convinced that the readers would be interested, and it was supposed to be an event—the first new Foundation novel in thirty-two years—so that it was simply essential for a magazine with my name on it to celebrate. Nervously, I let things go on. Well, at the time I'm writing this, that issue has not yet appeared, and all I can say is I hope they are right, but I'll bet New York City to South Succotash that I get letters talking about my giant ego.

2) I'm nervous about taking up the room. We can only print so many words of fiction per issue and we have hundreds of times that many submitted to us. Over ninety-nine percent of the stories we get must be rejected, and a few of them are marginal and *almost* make it. If I publish a story in the magazine, then some story that might have made it if I weren't there might *not* make it.

Have I the right to lose some writer a sale? I have no great need of money or exposure or fame, and the other writer may well have a need for all three.

You might say, of course, that my story is better than the



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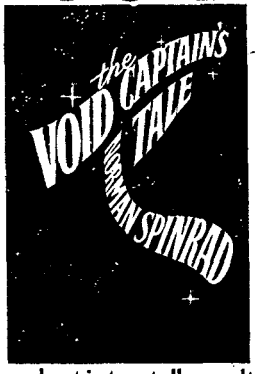


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story that was rejected to make room for it. You might say that *every* story printed brings about the rejection of some story that might otherwise have been accepted. Granted, but can I be sure that a rejectee might not feel particularly hurt if he imagines that his story has been rejected just so that *mine* can be printed, feeling that with my name in the title, I have an unfair advantage? I know this is not really so, but even if I don't take an unfair advantage, I might be *appearing* to take one.

3) There is really a question of time. I do have a great many commitments, and in some directions they are getting worse. For instance, Doubleday, having waited three decades, finally lost patience and insisted I write a new Foundation novel over my loudly expressed fears that I couldn't.

So I wrote it, and when I finally brought in *Foundation's Edge*, my editor grew seriously annoyed. He had tended to believe my protestations, but he was only partway through when he said, "Now I'm *really* mad, Isaac. Why haven't you been writing science fiction all along?"

You might say that that is only a very gentle and kind-hearted young man buttering up a peculiar author who is past his prime, but while you might butter up an undeserving person with words, you don't do it with money, not if you want to stay in business for very long. Yet not long after the novel was brought in, Hugh placed a contract for another novel in my hands, and the first half of an even larger advance than *Foundation's Edge* had gotten me, and said, "Don't say anything. Just sign where I'm pointing."

This new contract is for the third Lije Baley/R. Daneel novel, the sequel to *The Caves of Steel* and *The Naked Sun*. Doubleday has been waiting only 25 years for this one, so it's clear they're becoming increasingly unreasonable.

Hugh said I could start it when I felt ready, but today he wanted to know if I had started it yet, and he also said in an offhand manner, as though he were just thinking out loud, that it might be a good idea if I pushed aside all other commitments and just wrote novels—one—after—the—other.

It makes my blood freeze. It really does!

There *are* other writing projects I want to undertake. And yet Doubleday, more than any other publishing firm, has made me what I am today, and somewhere in my misspent youth, I got hooked on a thing called "gratitude." It's very inconvenient and it gets me into a lot of trouble, but there it is. And if I oblige them, will I have time



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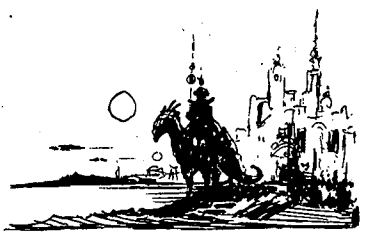
to write lots of stuff for *Asimov's*?

4) I can hear you all say, "Sure you will, Isaac. How long does it take *you* to knock off a story, for goodness' sake? You can do it during lunch hour."

I admit I can write monthly columns for extended periods of time. I've kept up one series nearly twenty-five years without faltering. These columns are not science fiction, however. They're science essays or, in one case, mystery fiction. Those are no problem.

Science fiction is harder to do, and if I tried to churn out SF stories when there wasn't adequate time, I would surely turn out below-par potboilers, and I don't want to do that, either.

Well, then, Gentle Readers, what do you think? Please consider what I have said concerning the very real problems that bother me, and let me have your conclusions. I want to know. ●

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Raised above the firmament
Yet still strong
For the spirit of man,
Birthed in the soil of Earth
Dwells within.

With bare hands,
On sand and upon rock
We built our homes.
Hollowed our mountains
Disgorged the earth
Reached for the heavens.
Throughout the years
Over the centuries
Those homes have formed us:
Molded our spirits
Kneaded our souls.

Now
In emptiness
We build our homes.
No longer reaching for
But in the heavens.
Our cornerstones laid
With ships that have never cut water
Nor seen a harbor of Earth.
The homes we build here
Ready to mold us
Shape us in nothingness
And out of nothingness
Without friction
Ready for the unknown
Our home
A star
For Earth

—Roger Dutcher

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# ON BOOKS

by Baird Searles

**The White Plague**
By Frank Herbert
Putnam's, $14.95

In Dublin, a car in which a bomb has been planted by an Irish terrorist explodes at a busy intersection. Among those killed are an American woman and her two children, recently settled in Ireland with her husband, a genetic researcher.

So far, all-too realistic. Unnervingly, so are the results of this tragedy. The woman's husband, one John O'Neill, is an exceptionally talented geneticist; his revenge for his Family's death is to create a disease that attacks only women (though it can be carried by men) and kills quickly. O'Neill spreads the disease to Ireland, England, and Libya as the prime targets for revenge. (Irish terrorists are trained in Libya.)

This is the opening premise of Frank Herbert's new novel, *The White Plague*, and it's a pretty scary one, since he makes it almost totally convincing. But if you're looking for a good juicy end-of-civilization-as-we-know-it novel, this ain't it. Only peripherally do we get any accounting of the horrors that occur as the plague spreads and the countries of the world move to stop it from crossing their borders, or to eliminate (usually by fire, sometimes with atomic weaponry) the "hot spots" where it has broken out within. Whoosh! There goes Rome. Pow! Istanbul is eliminated.

We are told of these things only at second hand, however. Nor are we given any real picture of a womanless society like the one in Philip Wylie's *The Disappearance*, in which both sexes vanish from each other's ken. Herbert has other fish to fry and I'm not sure just what those fish are about.

The story is told as a mosaic, following several lines. One is that of O'Neill, who having created the plague in America, returns to Ireland after it has wreaked its havoc. He falls in with the man who originally planted the bomb, through circumstances that are logical but not necessarily believable, and with him and several others makes his way across the devastated countryside.

Other ongoing narratives fol-



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low the upper echelons of power —two presidents of the U.S. (the first dies of a heart attack), the secretary general of the U.N., and the new Pope (in Philadelphia) as they maneuver around often bizarre international developments (including the possibility of blackmail by any nation that succeeds in finding a cure). And then there is the scientific community; a portion of the story is devoted to an international team of biologists as it attempts to find the cure, loses its two female members to the plague almost immediately, and debates about what to do if it *does* succeed.

The strands are all drawn together at the end, successfully, I think, except perhaps for the fate of John O'Neill, which comes perilously close to a kind of black whimsy. I suppose one might say that Herbert's novel is about politics—the overt politics of politicians, the politics of science, even the small politics of the group in which O'Neill finds himself in Ireland, and, of course, always the politics of Ireland itself, which here come close to destroying the world. It's an unsensational novel about the possible end of civilization. As such, it's a respectable achievement. There are probably a bloodthirsty few, like myself, who feel that if one must face the end of civilization, one might at least be rewarded with a certain amount of thrills, rapine, and anarchy (tastefully depicted, of course).

**The Darkling**
By David Kesterton
Arkham House, $12.95

David Kesterton is a name unfamiliar to me. The jacket of *The Darkling* describes him only as a "young Canadian"; I would guess it to be his first novel, and it's a mixed bag, indeed.

It is certainly *au courant* in being what I, at least, think of as the new baroque SF, extravagant and extravagantly inventive, and more often than not, picaresque, following (or chasing) a hero (or heroine) across the fantastic landscape of another world or an Earth of the far future. Currently perhaps the most expert practioner of this school is the dazzling Gene Wolfe.

The hero of *The Darkling* is Maradek, a young primitive whose cave-dwelling tribe is generally pacific given the struggle for existence that is their daily life. The setting is a bleak world of six seasons, some of which bring hordes of terrible beasts ravaging across the tribe's limited horizon.

Maradek's odyssey in this case is the search for his father, who has set out to visit a neighboring tribe. For one reason or another, the search carries him farther and farther afield until he is well beyond where any of his tribe has been.



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He falls in with an odd couple: a wandering nontribal plainsman and his nonhuman companion, a gentle creature who does not speak but with whom Maradek can communicate by a sort of telepathy because his tribe has strong extrasensory powers. The trio vanquishes a giant grub-like creature, tames a family of hairy, bovine *muskang* which they ride, and crosses a dried-up sea littered with the remains of ships.

They find an ancient, abandoned city inhabited only by giant, humanoid robots who seem to do nothing but battle each other through its streets, and encounter various beings, human and non. Well toward the end of the book, they are captured by a giant bird, brought to another city (inhabited, this time) and made to fight in public games against more monstrous beasts. It is here that they discover the secret of Maradek's world and its insane motley of life forms—it is a biological experimentation station for an interstellar civilization. They also find Maradek's father—remember him?

The author certainly keeps things going; he has a flair for invention without taking us in circles, and Maradek's world is full of constant surprises around the next corner. This is undermined, though, by some sad deficiencies in the writing department. Events, motivations, and background are often pretty fuzzy, and dialogue and description are cardboard stiff. Kesterton also has a penchant for large and awkward words; this may be the lupine influence (that's a pun in the style of . . . ), but Wolfe's incredible vocabulary is used poetically and evocatively. Even if you don't know what his words mean, and are even too lazy to get up and check, they work; they bring forth some resonance that enhances the narrative. But in *The Darkling* they are just big klunky words. The hero's throwing rocks becomes a "lithic bombardment," for instance. Duck, everybody!

Nevertheless, the ideas are good and plentiful, and there are some images from the novel that will stay in my mind, despite the author's stilted transmission of them and his lithic bombardments of vocabulary. A fertile imagination is something that can't be learned; writing skills can.

**The New Visions**
Doubleday, $14.95

A few years back, we were deluged in science fiction and fantasy art books; the coffee tables groaned under them because of their weight, the bookshelves wouldn't hold them because of their size, and the eyes blurred with the imitations of imitations that plague



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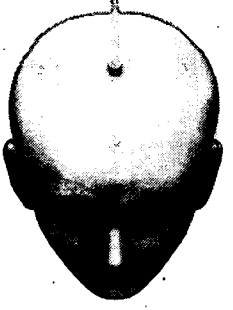
# Mindkiller



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SF art. The tide sank rather suddenly; art books are expensive, and only so many large-boobed-and-bottomed ladies, so many heavily thewed and thighed warriors, so many giant-economy-size serpents could be bought.

After a hiatus, there's a latecomer in the field, *The New Visions*; there is no editor listed, though an interior "editors' note" has at the bottom the names of Mary Sherwin, Ellen Asher, and Joe Miller. The book is devoted to reproductions of covers for the Science Fiction Book Club (*sans* lettering) by 23 artists (the word is used loosely in some cases); many are represented by several works and all have provided self-portraits graphically and in words.

One might have hoped for something a little different here, since a book club has, in effect, a captive audience and is not dependent on visual mass-appeal to sell its product. In other words, the artists could be less encumbered with the inevitable "commerical" necessities and have the opportunity to achieve something more original than the usual paperback type cover. (In tribute to our field's paint- and ink-slingers, I must say that I'm often surprised at how many good covers they turn out—as compared to other kinds of paperbacks—even given the commercial restrictions.)

But, alas, this collection looks like the new-releases rack of any given month at The Science Fiction Shop—a few beautiful paintings, a large percentage of adequate ones and some real horrors. The latter category includes one so awful that I ousted the book from my collection — the perpetrator shall remain nameless.

Deserving of mention are David K. Stone for his painterly, textured realizations of two of the "Faded Sun" books, among others; Don Maitz for a nicely decadent illustration for a Tanith Lee work; a Michael Whelan view of Piper's Fuzzies; and a Frank Frazetta painting of Barsoom that, despite his having become a cliché in his own time, captures the flavor of the original St. John drawings while still being wonderfully contemporary. Frederik Pohl provides an appreciative author's view of the artist as an introduction.

Despite the percentage of works that range from adequate to excellent here, though, there *is* a certain sameness of viewpoint and concept, if not necessarily of technique, that rather gives the lie to the book's title. There are really no *new* visions here; for those we will have to wait until there is a revolution in the taste of publishers and the public.



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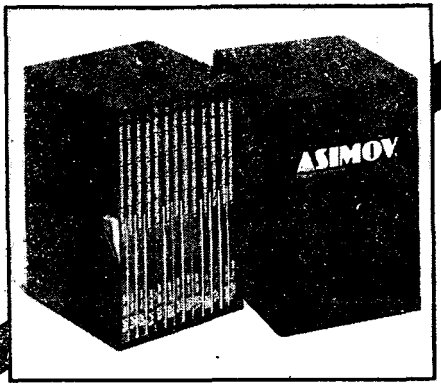


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**Index To the Science Fiction Magazines 1926—1950**
Compiled and arranged by Donald B. Day
G.K. Hall & Co., $48.00

I hope that my nonacademically inclined readers will forgive the inclusion of a book from an academic publisher, that I would like to note briefly because it's a wonderful piece of SF history.

The legendary "Day Index," which basically says which stories were published in which magazines between 1926 and 1950 (when SF was found *only* in magazines), was a labor of love by the late Don Day. It was begun in 1935 and Day established Peri Press in 1952 to publish it. In those pre-computer days, it was a staggering achievement, and, as noted, was done purely for love, since the number of science fiction fans at that point could hardly have financially justified the publication of such an esoteric tome. Lord knows, the libraries were not interested in indices of vulgar pulp literature.

So it is something of a triumph for the field in general and those early fans who sweated out such arcane projects in particular to see the Day Index now published (in a revised edition) by one of the major houses devoted to supplying reference works to libraries and other institutions.

**Jirel of Joiry**
By C.L. Moore
Ace, $2.75 (paper)

A couple of months ago, I noted the republication of C.L. Moore's "Northwest Smith" stories; now we can welcome back a collection devoted to one of her characters even more noted, if possible, in the history of science fantasy, *Jirel of Joiry*.

Where the Northwest Smith stories are science fiction, taking place in the future, with an overlay of lush fantasy, the stories of Jirel are very definitely fantasy, but with the hard edge of SF. Jirel is a warrior lady of medieval France, with her own castle and retainers and a tendency to wander into strange other worlds; these worlds and the various ways in which she finds them she ascribes to magic and sorcery, but Moore implies a rational basis (by 30's standards) of other dimensions and alien sciences.

But they have the unique, exotic flavor of all of Moore's worlds, rational or not. In "Black God's Kiss," Jirel descends to a strange land, entered through a forbidden passage in the depths of her own castle's dungeons, in hopes of finding a weapon to defeat the adventurer who has conquered her domain. She does. It is a kiss, given her by a terrifying sexless being of amorphous shape. When she returns to find her conquerer waiting, with rape in



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# PHOTONS

## YOU CAN MAKE LIGHT OF THEM

If you can read this, thank a photon! All these lighthearted little critters do all day is bounce off everything in sight, just so we can make out what's what. And fast? Whoo-ee! But best of all, the photon supply is endless. Really!

Why, even on a cloudy day, there's enough photons to choke a horse! You could take them home by the truckload and no one would ever miss them. So have a good time, use all the photons you like, and remember: **You can make light of them.**

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his eye, she delivers the kiss, with results far beyond what she expected. In "Black God's Shadow," she returns to the weird other world to save her former enemy's soul. And in "Hellsgarde," Jirel visits a haunted castle to save the lives of her men, and finds in residence a strange group of people for whom ghosts are prey.

As you can see, these were vastly original stories for the time of their publication (especially in having a heroic female protagonist). Come to think of it, they still are.

**The Best of H.P. Lovecraft: Bloodcurdling Tales of Horror and the Macabre**
By H.P. Lovecraft
Del Rey, $6.95 (paper)

Last year, after a ridiculous period when there were no H.P. Lovecraft paperbacks in print in this country, a uniform edition of six volumes was released that contained a good deal of his better work. (Writing for the pulps as he did resulted in a highly uneven output.) But not all of it—some of the very best was still not available due to a complicated rights problem. This has been remedied with *The Best of H.P. Lovecraft*—for once, the title of a book is very nearly correct. In one superb collection are:

"The Colour Out of Space," perhaps HPL's best short story, having to do with something that descends from the sky into a well on a New England farm and the hideous results; "The Dunwich Horror" devoted to the life of Wilbur Whately, the author's most repulsive character (next, of course, to Wilbur's family); "The Shadow Out of Time" which shows us glimpses of Lovecraft's creative view of Earth's history and that which existed there before man; and the famous "The Rats In the Walls" and "Pickman's Model" (the latter guaranteed to unnerve any resident of Boston—the geography of the city is given very specifically—as is what happens in the Boylston St. subway station). Sixteen stories in all, all the cream of the crop. If you haven't read Lovecraft, this book is the place to start. If you have, this is the prime collection to own (aside, of course, from that first Arkham House collection *The Outsider and Others* now selling in the multi-hundreds of dollars to collectors).

A word on the wraparound painting by Michael Whelan for *The Best of*.... The alert eye will note that it is the whole from which were taken the covers for the six volumes mentioned above, that were published last year.

Books to be considered for review in the column should be sent to Baird Searles, % The Science Fiction Shop, 56 8th Ave., New York, N.Y. 10014●



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# IAsfm Puzzle #7

by Merl H. Reagle

# WHITE HOLES

## ACROSS

1 Space —— (start daydreaming)
4 Eggs
7 Kirk's phaser, for one
11 Stronge urge
12 Clearing
14 Excellent
15 River with shadoofs
16 Speak
17 "The Mote in 88 Eye"
18 Young fans of astronauts
20 Berated ferociously
22 Early Henry Fonda role
23 Astronaut: slang
24 Hesitant sounds
25 H-deux-O
28 Shed items, nowadays?
30 Ball Player Slaughter
32 UFO shape, often
34 Friendship 7 and others
37 George Jetson's boss
39 Noted water proj.
40 A deadly sin
42 Gagarin and Shepard
45 Miles off
46 Dirty old man, perhaps
47 Railroad-tie arrangers
50 Part of a GI's address
52 Hooters
54 Room on Madison Avenue
56 NASA, for one
58 Oscar winner, 1981
62 Sticky situation
63 Uranian satellite
65 "Pavement inspector"
66 Star of "Brain from Planet Arous"
67 Deal in billboards
68 Lupino and others
69 Verne guy
69 Verne guy's milieu
71 On-course statistic?

## DOWN

1 Of the ear
2 Bruins' school
3 Film vamp or Perry Mason opponent
4 Chooses
5 Dolphin doc
6 The end of ——
6 Ultramodern
8 Achievement in architecture or page layout
9 Let loose the floodgates
10 Avis apartments?
11 "Lost ——" (old TV show)
12 SF setting
13 Cosmic contests
19 Go down
21 Family division, in a way
23 Compact appliances or containers
25 Muskie or O'Brien: abbr.
26 Invisible area of jurisdiction
27 The Shuttle is part of it
29 Entr' —— (intermission)
31 Big-mouthed jar
33 TV commercial award
35 Remove rind
36 "Dark ——"

**Note: Take special care to keep the title of this puzzle in mind while solving.**

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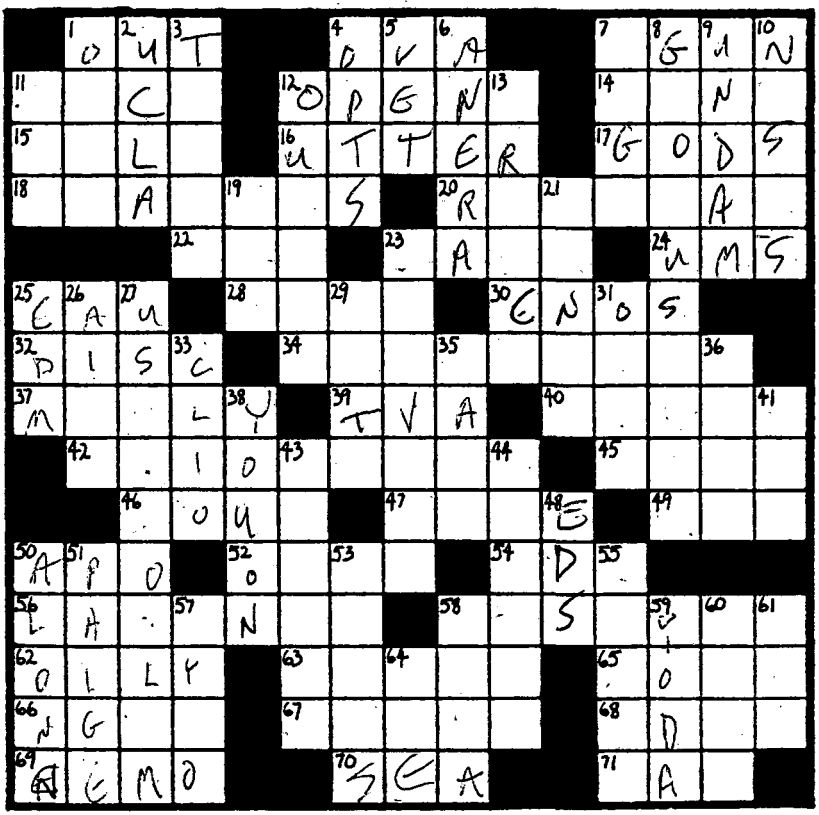
Solution on page 106

38 "Whose side are ——?"
41 Short periods?
43 Wheeler-dealer's offering?
44 Extremely slow speed
48 Ames and Asner
50 "Now that I am ——, nobody cares about me—Harry Nilsson
51 Actress Janis
53 Instruments for Sappho
55 The Enterprise, for one
57 Architect Saarinen
58 ——precedent
59 Luke and Ben's mentor
60 Part of a typewriter
61 WBS finales, sometimes
64 Schubert's Symphony No. 7 —— Major



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# MARTIN GARDNER

## THE DEMON AND THE PENTAGRAM

Ever since reading Goethe's *Faust* I have been fascinated by the strange ritual that enabled Faust to transform his poodle into Mephistopheles, and by the role played by a pentagram, or "devil's foot," that Faust drew on the floor at the entrance to his study. The pentagram is the five-pointed star (shown in Figure 1) that

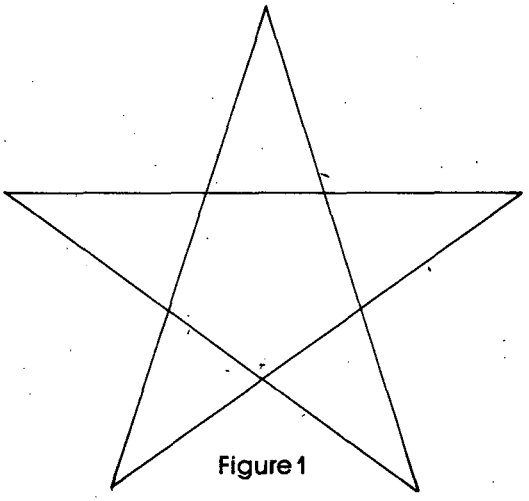

Figure 1

every child learns to draw in one continuous line of five straight segments. Because Faust failed to close completely one of the star's points, Satan's attendant was enabled to enter the study, but the closed sides of the interior pentagon prevented him from leaving.

Use of the pentagram for magic purposes goes back to the ancient Greek Pythagoreans. Throughout the middle ages it represented Christ if drawn with one point straight up, Satan if drawn with a point straight down. It was widely used for charms and magic spells, and became a fundamental symbol for such occult groups as the Rosicrucians and such secret orders as the Freemasons.

You can imagine my excitement when there fell into my hands an old parchment from Germany that gave in detail the exact

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ritual by which Faust had summoned Mephistopheles, the second greatest of the fallen angels. One stormy winter night, when my wife was sleeping soundly, I climbed the stairs to my attic study. Uri, our black cocker spaniel, followed at my heels.

I looked the door. On the inside of the door, with red chalk and a shaking hand, I drew a large pentagram, pointing it downward and carefully leaving a tiny gap at the bottom corner. For weeks I had been secretly gathering all the paraphernalia required by the ritual: thirteen black candles, a broken crucifix, a goblet of human blood, the eye of a newt, the heart of a frog, and assorted oils and rare unguents.

Uri began to whine and cower as I neared the end of the ceremony. A reddish haze enveloped the dog, whose form began to blur and writhe until it resembled a baby dragon. A soft explosion produced a cloud of dark sulphurous smoke. When the smoke cleared, Uri was gone. In his place stood a tall, evil-looking man dressed neatly in a business suit.

"Well done, my friend," said Mephistopheles. "Your pentagram has trapped me as you planned. If you'll kindly erase it, I'll be on my way."

"I'll do nothing of the sort," I replied, "until you make me an acceptable offer."

"I expected that," said the demon. "How would you like a spotless first edition of Goethe's *Faust*? It's worth a fortune."

"And what must *I* do?"

"Just erase that damnable diagram. I'll return as soon as you replace it with another pentagram, provided you draw it a certain way. You're a mathematician—at least you pretend to be—so you probably know that each corner of a regular pentagram is an angle of 36 degrees. This makes a total of 180 degrees for the five points."

"Yes, I'm aware of that."

"Good," said the demon. "Now, when you draw your new pentagram, skew its lines a bit so that the sum of the five angles is either more or less than 180 degrees by at least one degree. Such a figure allows me to come and go as I please. I will not return unless you draw it properly. As soon as you do, I'll bring you Goethe's priceless volume."

"Let me make sure I understand," I said. "I must draw the star with five continuous straight lines as before. But I must make the star sufficiently irregular so that the sum of its points will differ from a straight angle by one or more degrees."

"Precisely. It doesn't even have to look like a star." The demon



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took a pencil and sheet of paper from my desk and drew the three diagrams shown in Figure 2, adding black spots to mark the

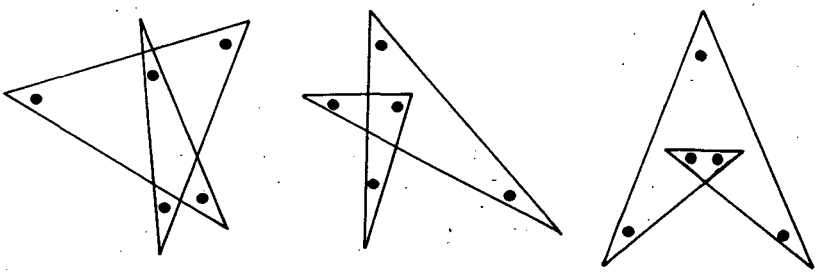
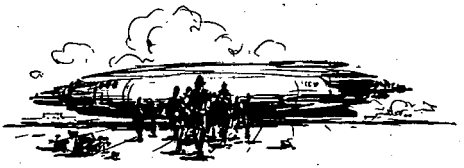


Figure 2

interior angles of each. "As you see, the diagram on the left is recognizable as a distorted star. But you may also draw, if you prefer, degenerate stars like the other two diagrams, stars with one or two points on the inside. Make the sum of the five angles anything you like except 180."

The proposition seemed reasonable enough. We shook hands. When I erased my regular pentagram Mephistopheles vanished instantly. I never saw him or Uri again.

No, the demon had not lied. I simply failed to fulfil my part of the bargain. Can you explain why? The curious answer is on page 51.



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# GAMING

by Dana Lombardy

"Take Your Tentacles Off My Hyper-Space Cone!"

No, that's not a line out of a B-movie. It describes a situation that sometimes occurs in a typical game of *Cosmic Encounter*, one of many science fiction board games available today.

You may be familiar with board games through some of the classics, such as chess, checkers, go, or backgammon. Or you may think of them by name, such as *Monopoly*, *Clue*, *Risk*, or *Candy Land*. When asked to name a popular board game, most people would probably respond by naming one of these. Science fiction board games are numerous but not as well known. Even though there are stores that specialize in SF games (just like the book stores that cater to SF and fantasy readers), they don't usually receive as much publicity as they should.

So, for you readers looking for something new in SF involvement and challenge, here are a few significant SF board games. Keep in mind that these are not children's games, or roll-dice-and-move chase or capture games that merely use a science or science fiction title to exploit the current popularity in SF. All these games are designed for *adults*, and the story and sophistication integral to each was intended for someone who appreciates science fiction.

*Cosmic Encounter* (Eon Products Inc., RFD 2, Sheldon Road, Barre, MA 01005) has been voted the "2nd Best Family Game" after *Monopoly* in both the 1980 and 1981 Games Day convention balloting held in London each year, and won "Best Science Fiction Game" in this year's balloting. It's been selected for the "Games 100" editors' list for *Games* magazine in 1980, 1981, and 1982.

The game starts with an interesting premise: each of the two, three, or four players *must* be an alien—no humans are allowed. You must think like an alien and respond to the other different aliens in the game. While each alien has a unique power, players will have to make alliances, or at least negotiate neutrality at crucial points, in order to win. Victory goes to the player who establishes five bases on any planets outside his own five-planet system. To do this, you use the hyper-space cone and tokens (space fleets/armies) against another alien's planet. You and your opponent then try to convince neutral aliens to jump in on your respective sides.

*Cosmic Encounter* is fast and tense. You can complete a game in as little as 45 minutes, although



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good multi-player games usually last a couple of hours. To keep interest in the game growing, Eon has released *eight* expansion sets, with new aliens, new cards, and advanced rules.

*Star Fleet Battles* (Task Force Games, 1110 N. Fillmore, Amarillo, TX 79107). This game is much more complex and detailed than the previous title. In *Star Fleet Battles* you're a starship commander. Usually, you control just one starship in various scenarios to perform assigned missions. There are scenarios for both the basic and advanced games, including a duel between hostile cruisers; a solitaire or multi-player fight against a planet-crushing alien monster; saving an outpost base from a raid by enemy ships; dealing with sabotaged engines while confronting an attacking enemy starship; and operating a convoy against a pirate raider, just to mention a few.

*Star Fleet Battles* uses color punch-out cardboard playing pieces for ships (tugs, drones, freighters, cruisers, etc.), stations, planets, asteroids, etc. Seven races are represented: the Federation, Orion, Tholian, Gorn, Klingon, Kzinti, and Romulan. You keep key data on the current status of your ship on a Ship's Systems Display sheet, checking off boxes in the shields, scanner and sensor, warp and impulse engines, and bridge as hits score against you. There's lots of detail and charts to keep track of, but despite this complex design, the game has sold surprisingly well—more than 53,000 copies since being introduced in 1979. Also available are three expansion sets adding new races, new ships, new weapons, and new scenarios.

*Grav-Ball* (FASA, Box 6930, Chicago, IL 60680) imagines what a spectator sporting event of the future might be like. The game presents a zero-gravity enclosed playing area in which two six-man teams struggle to put a five-kilogram steel ball through the opponents' goal. Physical contact and injuries are part of the game, requiring all players to be armored. If things start to get out of hand, "Heartless Huey" the robot umpire is released to incapacitate players until the mayhem stops.

Each player controls six *Grav-Ball* players which are represented by tiny metal miniatures with base and steel rod support. Your opponent positions his force while "Heartless Huey" awaits developments. Play crosses a full-color 11-inch-by-17-inch mounted game board in turns representing one minute of real time. The game is divided into three periods, each consisting of six turns. It's fast and furious, with easy-to-read and well-illustrated rules. ●

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Nadine Triomph checked the long list of symbols for — what was it?—the tenth time. She did not think she could get anything out of it that Multivac had not, but it was only human to try.

She passed it over to Basil Seversky. "It's completely different, Basil," she said.

"You can see that at a glance," said Basil, gloomily.

"Well, don't drag. That's good. So far the only gene combinations that Multivac has dredged up seem to have been minor variations on a theme. Now this one is different."

Basil put his hands into the pockets of his lab jacket and leaned his chair back against the wall. He felt the line of his hips absently and noted it was gaining a certain softness. He was getting pudgy all over, he thought, and didn't like it.

He said, "Multivac doesn't tell us anything we don't tell it first. We don't really know that the basic requirements for telepathy are valid, do we?"

Nadine felt defensive. It was Basil who had worked out the neurological requirements, but it was she who had prepared the program by which Multivac scanned the potential gene structures to see which might produce those requirements.

# POTENTIAL

## by Isaac Asimov

Is there—could there be—a genetic predisposition for ESP? And if there were, could a computer locate the one person in the world with such an arrangement of genes? Here is the Good Doctor, again in top form.

art: Broeck Steadman

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She said, "If we have two rather different sets of genetic patterns, as we now have, we can work out—or try to work out—the common factors, and this could give us a lead as to the validity."

"In theory—but we'll be working in theory forever. If Multivac works at its present speed for the remaining lifetime of the sun as a main-sequence star, it will not have gone through a duodecillionth of all the possible structural variations of the genes that might exist, let alone the possible modifications introduced by their order on the chromosomes."

"We might get lucky." They had held the same conversation — upbeat versus downbeat—a dozen times, with minor variations in detail.

"Lucky? The word hasn't been invented to describe the kind of impossible luck we would need. And if we do pick out a million different genetic patterns with potential for telepathy, we then have to ask what the odds are that someone now alive will have such a gene pattern, or anything near it."

"We can modify," said Nadine.

"Oh? Have you come across an existing human genetic pattern which can be modified by known procedures into something Multivac says will produce telepathy?"

"The procedures will improve in the future and if we keep Multivac working and keep on registering all human genetic patterns at birth—"

"—*And*," Basil continued sing-song, "if the Planetary Genetic Council continues to support the program adequately, *and* if we continue to get the time-sharing we need on Multivac, *and* if—"

It was at that point that Multivac interrupted with one more item and all a dazed Basil could say afterward was, "I don't believe it."

It seemed that Multivac's routine scanning of registered genetic patterns of living human beings had turned up one that matched the new pattern it had worked out as possessing telepathic potential—and the match was virtually exact.

Basil said, "I don't believe it."

Nadine, who had always been forced into unreasoning faith by Basil's consistent pessimism, said, sunnily. "Here he is, just the same. Male. Aged 15. Name Roland Washman. Only child. Plainview, Iowa. American Region, actually."

Basil studied Roland's genetic pattern, as delivered by Multivac, and compared it with the pattern worked out by Multivac



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from theoretical considerations. He muttered, again, "I don't believe it."

"It's there before you."

"Do you know the odds against this?"

"It's there before you. The Universe is billions of years old and there's been time for a great many unbelievable coincidences to happen."

"Not this unbelievable." Basil pulled himself together. "Iowa was included in one of the areas we scanned for telepathic presence and nothing ever showed up. Of course, the pattern only shows the *potential* for telepathy—"

It was Basil's plan to approach indirectly. However much the Planetary Genetic Council might post the possibility of telepathy as one of the goal-patterns to be searched for, along with musical genius, variable-gravitational endurance, cancer resistance, mathematical intuition, and several hundred other items, it remained that telepathy had an ingrained unpopularity.

However exciting the thought of "reading minds" might seem in the abstract, there was always an uneasy resistance to the thought of having one's mind read. Thought was the unassailable bastion of privacy, and it would not be surrendered without a struggle. Any controvertible claim to have discovered telepathy would, therefore, be surely controverted.

Basil, therefore, overrode Nadine's willingness to move straight to the point and to interview the young man directly, by making that very point.

"Oh, yes," he grumbled, "and we will let our eagerness lure us into announcing we have found a telepath so that the PGC will put half a dozen authorities on his track in order to disprove the claim and ruin our scientific careers. Let's find out all we can about him *first*."

The disappointed Nadine consoled herself with the obvious fact that in a computerized society, every human being left tracks of all kinds from the moment of conception, and that it could all be recovered without much trouble, and even quickly.

"Umm," said Basil, "not very bright in school."

"It could be a good sign," said Nadine. "Telepathic ability would surely take up a sizable fraction of the higher functioning of the brain and leave little over for abstract thought. That might explain why telepathy has not evolved more noticeably in the human species. The disadvantage of low intelligence would be contra-survival."



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"He's not exactly an *idiot savante*. Dull-normal."

"Which might be exactly right."

"Rather withdrawn. Doesn't make friends easily. Rather a loner."

Nadine said, excitedly. "*Exactly* right. Any early evidence of telepathic ability would frighten, upset, and antagonize people. A youngster lacking judgement would innocently expose the motives of others in his group and be beaten up for his pains. Naturally, he would withdraw into himself."

Data was gathered for a long time, thereafter, and Basil said, finally. "Nothing! There's nothing known about him; no reports, not one, that indicates anything that can be twisted into a sign of telepathy. There's not even any comment to the effect that he's 'peculiar'. He's almost disregarded."

"*Absolutely* right. The reaction of others forced him, early on, to hide all telepathic ability, and that same telepathic ability guided his behavior so as to avoid all unfavorable notice. It's remarkable how it fits."

Basil stared at her with disfavor. "You can twist anything into supporting your romantic view of this. Look! He's fifteen and that's too old. Let's suppose that he was born with a certain amount of telepathic ability and that he early learned not to display it. Surely the talent would have atrophied and be entirely gone by now. That has to be so for if he remained a full telepath, he couldn't possibly have avoided displaying it now and then, and that would have attracted attention."

"No, Basil. At school, he's by himself and does as little work as possible—"

"He's not scapegoated, as he would be if he were a telepathic little wise-guy."

"I told you! He knows when he would be and avoids it. Summers he works as a gardener's assistant and, again, doesn't encounter the public."

"He encounters the gardener, and yet he keeps the job. It's his third summer there right now, and if he were a telepath, the gardener would get rid of him. No, it's close—but no cigar. It's too late. What we need is a new-born child with that same genetic pattern. Then we might have something—*maybe*."

Nadine rumpled her fading blonde hair and looked exasperated. "You're deliberately trying to avoid tackling the problem by denying it exists. Why don't we interview the gardener? If you're willing to go to Iowa—I tell you what, I'll pay the plane fare, and



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you won't have to charge it to the project, if that's what's bothering you."

Basil held up his hand. "No, no, the project will bear it, but I tell *you* what. If we find no signs of telepathic ability, and we won't, you'll owe me one fancy dinner at a restaurant of my choice."

"Done," said Nadine, eagerly, "and you can even bring your wife."

"You'll lose."

"I don't care. Just so we don't abandon the matter too soon."

The gardener was by no means enthusiastically cooperative. He viewed the two as government officials and did not approve of them for that reason. When they identified themselves as scientists that was no better ground for approval. And when they asked after Roland, he neared the point of outright hostility.

"What do you want to know about Roland for? Done anything?"

"No, no," said Nadine, as winningly as she might. "He might qualify for special schooling, that's all."

"What kind of schooling? Gardening?"

"We're not sure."

"Gardening's all he's good for, but he's good at that. Best I've ever had. He doesn't need no schooling in gardening."

Nadine looked about appreciatively at the greenhouse and at the neat rows of plants outside as well. "He does all that?"

"Have to admit it," said the gardener. "Never this good without him. But it's all he's good for."

Basil said, "Why is that all he's good for, sir?"

"He's not very bright. But he's got this talent. He'll make anything grow."

"Is he odd in any way?"

"What do you mean, odd?"

"Funny? Peculiar? Strange?"

"Being that good a gardener is strange, but I don't complain."

"Nothing else."

"No. What you looking for, mister?"

Basil said, "I really don't know."

That evening, Nadine said, "We've got to study the boy."

"Why? What have you heard that gives you any hope?"

"Suppose you're right. Suppose it's all atrophied. Still, we might find a *trace* of the ability."



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"What would we do with a trace? Small effects would not be convincing. We have had a full century of experience with that, from Rhine onward."

"Even if we don't get anything that would prove anything to the world, so what? What about *ourselves*? The important thing is that we'd satisfy ourselves that when Multivac says a particular genetic pattern has the potential for telepathy, it's right. And if it's right, that would mean your theoretical analysis—and my programming, too—was right. Don't you want to put your theories to the test and find confirmatory evidence? Or are you afraid you won't."

"I'm not afraid of that. I *am* afraid of wasting time."

"One test is all I ask. Look, we ought to see his parents anyway, for whatever they can tell us. After all, they knew him when he was a baby and had, in full, whatever telepathic powers he might have had to begin with—and then we'll get permission to have him match random numbers. If he fails that, we go no further. We waste no more time."

Roland's parents were stolid and totally non-informative. They seemed as slow as Roland was reported to be, and as self-contained.

There had been nothing odd about their son as a baby, they said. They repeated that without guilty over-emphasis. Strong and healthy, they said, and a hard-working boy who earned good money over the summer and went to high-school the rest of the year. Never in any trouble with the law or in any other way.

"Might we test him?" asked Nadine. "A simple test?"

"What for?" asked Washman. "I don't want him bothered."

"Government survey. We're choosing fifteen-year-old boys here and there so we can study ways to improve methods of schooling."

Washman shook his head. "I don't want my boy bothered."

"Well," said Nadine, "you must understand there's two hundred fifty dollars to the family for each boy tested." (She carefully avoided looking at Basil, certain that his lips would have tightened in anger.)

"Two hundred fifty dollars?"

"Yes," said Nadine, trying hard. "After all, the test takes time and it's only fair the government pay for the time and trouble."

Washman cast a slow glance at his wife and she nodded. He said, "If the boy is willing, I guess it would be okay."

Roland Washman was tall for his age and well-built, but there



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seemed no danger in his muscles. He had a gentle way about him, and dark, quiet eyes looked out of his well-browned face.

He said, "What am I supposed to do, mister?"

"It's very easy," said Basil. "You have a little joy-stick with the numbers 0 to 9 on it. Every time, that little red light goes on, you push one of the numbers."

"Which one, mister?"

"Whichever one you want. Just one number and the light will go out. Then when it goes on, another number, and so on, until the light stops shining. This lady will do the same thing. You and I will sit opposite each other at this table, and she will sit at this other little table with her back to us. I don't want you to think about what number you're going to push."

"How can I do it without thinking, mister? You got to think."

"You may just have a feeling. The light goes on, and it might seem as though you have a feeling to push an 8, or a 6, or whatever. Just do it, then. One time you might push a 2, next time a 3, next time a 9 or maybe another 2. Whatever you want."

Roland thought about it a bit, then nodded. "I'll try, mister, but I hope it don't take too long, because I don't see the sense of it."

Basil adjusted the sensor in his left ear-canal unobtrusively and then gazed at Roland as benignly as he could.

The tiny voice in his left ear breathed, "Seven", and Basil thought: Seven.

And the light flashed on Roland's joystick, and on Nadine's similar joystick and both pushed a number.

It went on and on: 6, 2, 2, 0, 4, 3, 6, 8. . . .

And finally Basil said, "That's enough, Roland."

They gave Roland's father five fifty-dollar bills, and they left.

In their motel room, Basil leaned back, disappointment fighting with the satisfaction of I-told-you-so.

"Absolutely nothing," he said. "Zero correlation. The computer generated a series of random numbers and so did Roland, and the two did not match. He picked up absolutely nothing from my thought processes."

"Suppose," said Nadine, with a dying hope, "he could read your mind but was deliberately masking that fact."

Basil said, "You know better than that. If he were trying to be wrong on purpose, he would almost certainly be *too* wrong. He would match me less often than chance would dictate. Besides, you were generating a series of numbers too, and you couldn't



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read my thoughts either, and he couldn't read yours. He had two sets of different numbers assailing him each time, and there was zero correlation—neither positive *nor* negative with either. That can't be faked. We have to accept it, he doesn't have it, now, and we're out of luck. We'll have to keep looking, and the odds of coming across anything like this again—"

He looked hopeless.

Roland was in the front yard, watching after Basil and Nadine, as their car drove off in the bright sunlight.

He had been frightened. First they had talked to his boss, then to his parents, and he thought that they must have found out.

How could they have found out? It was impossible to find out, but why else were they so curious?

He had worried about all that business of picking numbers, even though he didn't see how it could do any harm. Then it came to him that they thought he could hear human voices in his mind. They were trying to think the right numbers at him.

They couldn't do that. How could he know what *they* were thinking? He couldn't ever tell what people were thinking. He knew that for certain. Couldn't ever!

He laughed a little to himself, very quietly. People always thought it was only people that counted.

And then came the little voice in his mind, very thin and very shrill.

"When— When— When—?"

Roland turned his head. He knew it was a bee winging toward him. He wasn't hearing the bee, but the whole mind of the whole hive.

All his life he had heard the bees thinking, and they could hear him. It was wonderful. They pollinated his plants and they avoided eating them, so that everything he touched grew beautifully.

The only thing was they wanted more. They wanted a leader; someone to tell them how to beat back the push of humanity. Roland wondered how that could be done. The bees weren't enough but suppose he had all the animals. Suppose he learned how to blend minds with all of them. Could he?

The bees were easy, and the ants. Their minds built up in large crowds. And he could hear the crows now. He didn't used to. And he was beginning to make out something with the cattle, though they weren't worth listening to, hardly.

Cats? Dogs? All the bugs and birds?



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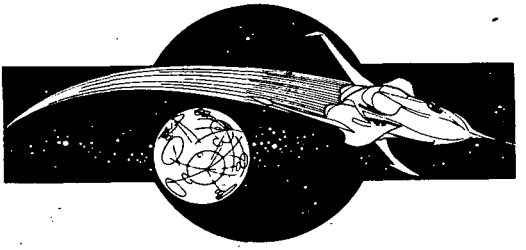
What could be done? How far could he go?

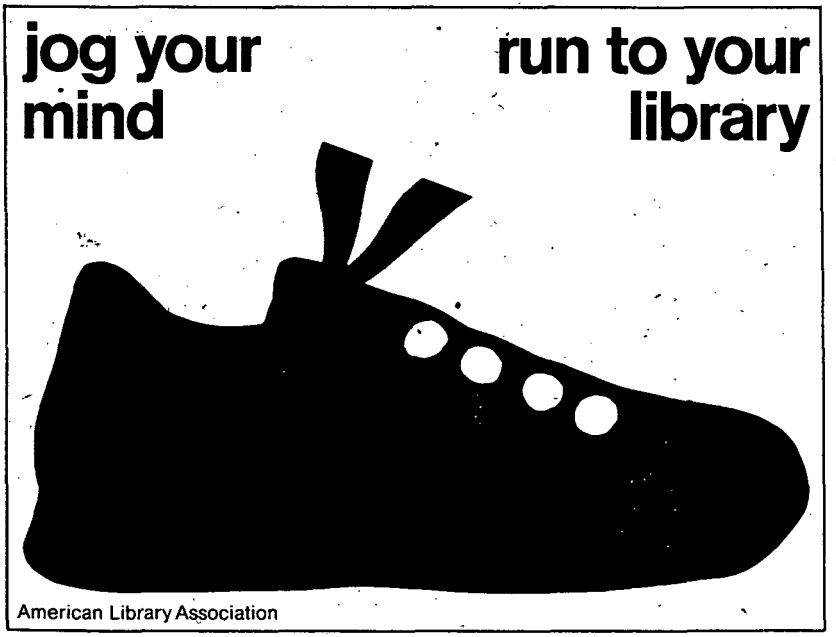
A teacher had once said to him that he didn't live up to his potential.

"When— When— When—" thought the bee.

"Not yet— Not yet— Not yet—" thought Roland.

First, he had to reach his potential. ●







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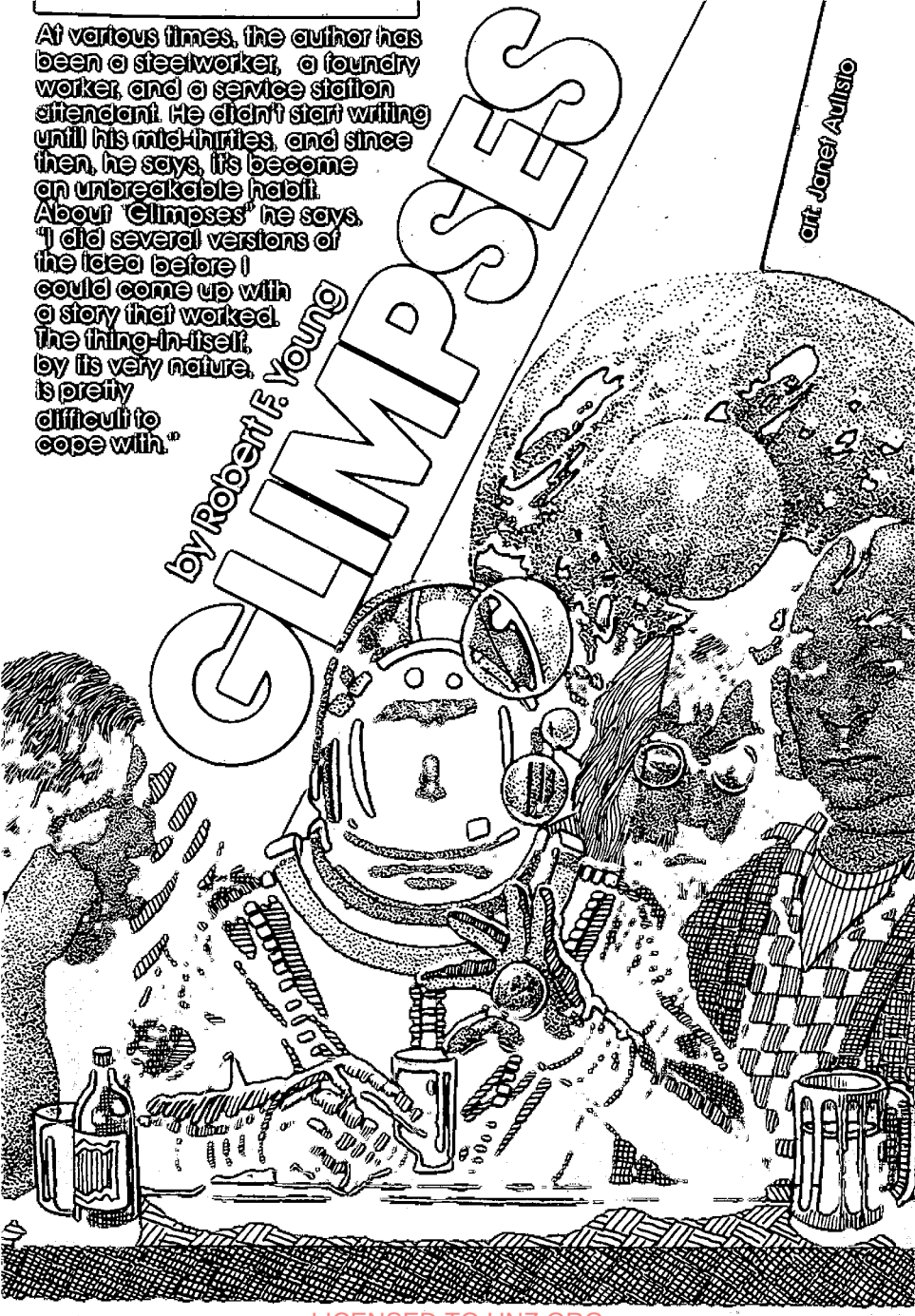
# GLIMPSES

by Robert F. Young

art Janet Aulisio

At various times, the author has been a steelworker, a foundry worker, and a service station attendant. He didn't start writing until his mid-thirties, and since then, he says, it's become an unbreakable habit. About "Glimpses" he says, "I did several versions of the idea before I could come up with a story that worked. The thing-in-itself, by its very nature, is pretty difficult to cope with."



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People think I am crazy.

This is because I keep telling my tale time and time again. After each telling I am rewarded with stares of disbelief or stares of pity, and sometimes with outright laughter. But I feel it is my duty to tell it, to inform the world that the reality we think we live in is a cosmic lie.

But people listen to what I say. They do not believe, but they listen. They listen because part of the tale is history, because I am truly the astronaut who once set forth in the starship *Zeus* for Van Maanen's Star; who brought the starship back to Earth after his fellow astronauts, Scott and Marchen, were killed.

Yes, they listen, and they believe that part, but they do not believe that the starship exceeded the speed of light, providing me, before the on-board computer self-corrected and brought the ship back below c, with a glimpse of true reality's naked face. And they do not believe when I tell them what I saw.

It is the ancient mariner, and he stoppeth one of three. "There was a ship," quoth he.

The ancient mariner is me.

But I am not truly ancient. It is true that I have been retired from the Space Service, but this was not because of my age; it was because far more time passed on Earth during the *Zeus's* flight than passed for me. The true years that went by built up my length of service to pension point, but even if they had not, I would have been retired anyway because of the injury I suffered when the meteor impact threw the computer out of whack and killed Scott and Marchen. The injury was to my hip, and despite corrective surgery I limp slightly when I walk, because my right leg is shorter than my left.

I say "true years." But the many years that passed on Earth were no truer than the few that passed for me on board the *Zeus*. Both are products of c. Basically, there is no true time, and since space and time are indivisible, there can be no true space either.

No doubt there are many people to whom I have told my tale or who have heard it second-hand who say that the real reason I was retired from the Space Service had to do with my mind rather than my hip. Conceivably they are right. Nevertheless, although it is possible for a person to be crazy and not know it, I am certain I am sane.

I am going with this girl in the small town where I live. Her name is Barbara Black, and she is a black girl. People think this is strange, too, although they never say so, at least not to my face.

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You would think that by now racism would have vanished even from the minds of people who live in small towns. It has not. My parents are outraged. They have an only son who tells tall tales in bars and coffeehouses, and as though this were not bad enough, he is going with a black girl. I can understand their attitude, because they are from a much older generation than mine. Indeed, they are much more like my grandmother and grandfather than my mother and dad. But I cannot understand the attitude of the younger people in town. It is as though the callous hatred of their ancestors has been handed down to them in their genes.

Barbara does not seem to mind the virulent looks cast in our direction. She seems to walk above the paths of ordinary mortals. I feel sometimes that she is as much of an outsider as I am. Before I met her I would sometimes see her walking down the street, and her eyes would always reach out and touch mine. One time I saw her looking down at me from the window of her room in the hotel. I often saw her in bars and coffeehouses, in the background, sitting at a table, all alone. We met by chance one night. I had just told my tale in a coffeehouse and was going out the door, and she was just coming in. We did not bump into each other, not quite, but we came close enough to initiate a conversation, and not long afterward we were walking down the street beneath the stars. Barbara and I.

I have never told her my tale, but I am sure she has heard it second-hand.

I have never told her, either, about the glimpses I have been having since my return to Earth.

I have bought a Mercedes-Benz. Why not? I can afford it. But my parents think it is awful that I should squander so much money when I am not working. They are afflicted with the Protestant ethic. They think it is sinful of me to lie around and do nothing, even though I am relatively rich. In their philosophy, a man should work, work, work.

It is summer, and Barbara and I often go for long rides in the country. Sometimes I let her take the wheel. The car is bright red in color, and the redness makes her seem blacker than she really is. Blacker, but no more beautiful. She was beautiful to begin with. It is a fine car, but I doubt that it has the power Mercedes-Benzes had of old, and probably it doesn't ride as well. But I am a poor boy grown rich, and do not miss a bit of frosting on my cake.

When I am with Barbara, I never have glimpses. And I never



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tell my tale in any of the bars we sometimes stop in. But she can tell from the way people look at me that they think I am queer.

I told my tale to the debriefers after I brought the ship back to Earth. They listened politely and asked lots of questions. And they recorded everything I told them. Afterward they had me tell it to one of the shrinks the Space Service employs. I could tell from the questions he asked me that he was trying hard for paranoid schizophrenia. Shrinks always try for that. I think they like to let the term loose because it sounds so erudite and mysterious. I do not think even they know exactly what it means.

He kept asking me to describe the room with the two windows in which I found myself after the *Zeus* exceeded c. I could not describe it clearly, because its walls and ceiling and floor were little more than layers of darkness. I could see through the layers to other layers, and the layers seemed to go on forever.

He kept zeroing in on the desk I had found myself sitting at. "What kind of a desk was it, Captain Royce?"

"It was just a desk."

"Was it made out of steel or wood?"

"I don't know."

"And you were sitting before it, presumably on a chair, staring at the—ah—paperweight and the spaceship lying on its surface?"

"Yes."

"And the spaceship was an exact miniature of the *Zeus*?"

"Down to the smallest detail."

"What did you think the paperweight was?"

"I've told you over and over that at the time I didn't think anything. But afterward I concluded it was the universe."

"Was it sort of like one of those little glass paperweights you pick up and shake and cause it to snow inside?"

"Sort of."

"Could you see stars in it? Galaxies? Quasars?"

"All I could see was blackness."

"Why didn't you pick it up and shake it? Maybe you would have seen stars then."

"I didn't think to."

"All right, Captain Royce, let's get to the windows. Let's take the one you looked out first, the one on your left, I believe you said. Tell me again what you thought you saw."

"I saw a mountain. But it wasn't truly a mountain. It was Marchen."

"You mean that Marchen was so large he appeared to be a



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mountain?"

"Yes. He was sitting on a gray plain with his knees drawn up to his chest and his arms locked around them, sort of in a fetal position."

"And the other window—what did you see when you looked through that?"

"Another gray plain—perhaps the same one—and Scott lying on it. Like a gigantic ridge. Those were the positions I found both men in, later on in the cabin, after the *Zeus* dropped back below c."

"When the meteor penetrated the hull and the cabin's air was sucked out into space, you were in the command module, were you not?"

"Yes. Marchen and Scott were off duty. The meteor not only penetrated the hull; it also jammed the interconnecting lock and affected the relays of the on-board computer, causing it to accelerate the *Zeus* beyond c. Prior to the impact, we had been traveling at just below c."

"Captain Royce, you're an astronaut, and as an astronaut you must have enough scientific background to know that were a spaceship to exceed or even equal the speed of light, it and everyone on board would be transformed into energy. The *Zeus* couldn't have exceeded c. If it had, you wouldn't be here."

"Nevertheless, it *did* exceed c, and I *am* here."

"Thank you, Captain. That'll be all for now. Why don't you lie down for a while? You look as though you could stand some rest."

I did not tell the shrink about the glimpses I have been having since my return to Earth. Nor do I tell him about them when I go to see him monthly, in keeping with the Service's orders. He would like very much to put me away but has insufficient grounds to do so. Why should I lend him a helping hand?

My relationship with Barbara is platonic. I do not wish this to be so; I am in love with her, and she, I think, is in love with me. But our love seems to drive passion away. She does not even invite me up to her hotel room. It is always only a kiss and then goodnight when I take her home. It is impossible to look at her and not want her. She is goddess-tall, and her black hair falls to her shoulders. It swirls sometimes in the wind when we go driving. She wears summer dresses that bring out the graceful sweep of her legs and the smooth flow of her hips. When she walks, it is like a princess walking. I am tempted sometimes to ask her if she



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ever traced her genealogy; if she did, I am sure she would find she is the descendant of an African king. And then at other times I am not sure. She has an odd universal quality, as though she did not spring from any race, as though she is not part of mankind.

I do not know where she is from; she has never said, and I have refrained from asking. She is as much a stranger in town as I was when I first returned. As I still am, for my former friends have grown old and my conduct has alienated them. I am far younger than they, but in their eyes I am an ancient astronaut, deranged from his journey among the stars. An outsider. And Barbara is an outsider beside me.

My glimpses of non-c reality occur more and more frequently. They differ starkly from what I saw beyond c. I had one the other night when I was driving home after leaving Barbara at her hotel. Like its predecessors, it was of a maelstrom. It was as though mankind and the world and all the stars and everything that had ever happened and everything that will ever happen had been put into a cosmic mixing bowl and the beater turned on. I saw events, faces, scenes, constellations, quasars, pulsars whirling in the night. I glimpsed my mother's face, my father's. I glimpsed a thousand faces I had never seen before. All whirled among stars and battles and cities and primitive tracts of land, in a wild melee.

I suppose that such glimpses should not surprise me. It is hardly logical that the universe when glimpsed from within would make more sense than when glimpsed from without; that if I could sit at a desk, if indeed it was a desk that I sat at, and see the cosmos in the form of a paperweight, that the interior of the paperweight would follow the dictates of science.

A favorite question of my shrink's, when I mention the paperweight, is, "Did you think you were God?" Were I to say yes, he would have me. Schizophrenics often believe they are God, or that they sit at God's right hand. But I simply tell him the truth: that my moment beyond c was too ephemeral to allow me to think and that my thoughts since have never built up to a point where I regard myself as anything more than a mere man.

If the glimpses were the only heritage of my flight, it would not be so bad. But tonight, as I stand in my backyard looking up at the stars, I grow to the height of the moon. I reach out in wonderment and touch its cold, still face. Then the illusion vanishes—if illusion it was—and I am Earthbound again, a little Earthman staring at the stars.



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My quandary has led me to Kant. I thought perhaps he could help. He touched the truth, this little old man of Königsberg. But he ascribed it to the wrong effect. It is not our *a priori* perceptions that impose space and time; it is the speed of light. c has built this lovely prison mankind lives in, made sense of the thing-in-itself. It has made reality real in an acceptable form. It prevents man from being a poor beggar whirling with things in spacelessness. It has created space and injected her with the lifeblood of time.

Perhaps I should add my insight to the tale I tell in bars and coffeehouses. Perhaps I should take the ultimate step and come right out and say that space is not real. Perhaps I should tell this to my shrink. But I have already implied as much, and were I to say so outright, I would be inviting laughter in the first instance, and in the second, institutionalization.

Perhaps I should tell Barbara the truth as it has been revealed to me. Perhaps I will. But first I must tell her my tale, and about my glimpses through the curtain of c.

I have risen again to the height of the moon and touched its cold, still face.

Someday, no doubt, I shall rise to the height of the stars and burn my fingers on some fiery prominence.

Sometimes when I look into Barbara's eyes I feel she is not real. Her eyes are infinitely deep, and sometimes I think I see stars in them. Tiny stars, far, far away. And sometimes she blurs before my gaze, and her blackness becomes part of the night. At such times I reach out and touch her face, and I find its softness reassuring. Barbara is all I have. She accepts me; she does not mind that people think I am crazy. With her at my side I feel that I can endure the mishmash my glimpses have revealed reality to be.

"Barbara, Barbara, I must tell you my tale. I must tell you about my glimpses. Listen, Barbara, and please don't laugh."

She listens beside me in the night. I have parked the Mercedes near a woods far out of town. She listens in the night, moonlight and starlight pale upon her face, her deep, dark eyes upon me. I tell her of the maelstrom that reality has become before my eyes. I tell her of what I saw beyond c; of mountainous Marchen and ridge-like Scott, dead upon the plain of nowhen; of the pap-



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erweight-universe I found at my fingertips; of the miniature *Zeus*. I tell her how I have grown to the height of the moon and touched its face. I tell her about Kant and how he was almost right. And I tell her finally that I no longer believe space is real.

When I have finished, she touches my hand. "I had to wait for you to tell me, although I knew. Otherwise, it would not have been fair."

I feel her cool fingers in my mind. I sense their therapeutic palpations. "Your perceptions must be mended. They have made you a thorn in my side."

"Who are you?" I whisper.

"You must know who I am."

"No. I don't know."

" 'I am black but comely.' Would you not agree?"

" 'Behold thou art fair, my love; behold, thou art fair.' "

"Would you prefer a maelstrom? Or would you rather, waking in the morning, see the gentle light of the new day in your room? And walking down the morning street, see trees standing straight and tall, and high, high above them, the blue sky? And later on, in seeming time, would you not rather look up into the sky and see a moon you could not touch? Is it not far, far better for the stars to be in their proper positions? That which seems to be, is, but for this to be so, one must see through a glass, darkly."

Her words seem to come from far away. It is as though she has left me. And yet there is a black girl sitting on the seat beside me. The black girl who looked at me when she saw me passing on the street; who looked down at me from her hotel window. Who almost bumped into me one night after I had told my tale. Who walked with me beneath the stars. Yes, sitting there beside me. Barbara Black.

Yes. Barbara Black. I have been to space, and I have come back and found her. In space, I was injured by a meteor impact that killed Marchen and Scott. I dreamed a grotesque dream that I thought was real, and after my return I told it again and again in bars and coffeehouses. And I kept imagining I could perceive the thing-in-itself.

The night is warm around me. The sky is bedighted with stars. Such lovely stars! And there, high above, is that "orbèd maiden with white fire laden, whom mortals call the moon."

I look into Barbara's eyes and see the stars again. I kiss her, and her lips are still and cold. Still and cold, like the moon. I have a tenuous memory of touching the moon. It vanishes before the kiss is done.



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"Tomorrow," she says, "I am going away."

"Don't go—please. Or if you must, take me with you."

"I can't."

I kiss her again, and her lips are even colder than before. In a sense, she has already gone away. At length I drive her home. "Goodnight," she says when I drop her off. But what she really means is goodbye.

I have taken a job in this little town where I live. I have taken it partly to please my aged parents but mostly to fill the long days of dying summer.

Barbara is gone.

I tried to find out where she went, but she told no one, and she left no forwarding address at the hotel. None of the bus drivers I have talked to remembers a goddess-tall black girl. I checked the airlines in the nearest city. There was no record of her booking passage anywhere, and no one remembers having seen her.

I am all alone.

"This room with the two windows you found yourself in, Captain Royce. Please describe it for me again."

"There was never such a room."

"You told me about one. And you told me about an anthropomorphous mountain and an anthropomorphous ridge that you saw through its windows."

"It was all in my mind."

"And the paperweight-universe and the miniature starship. Were they merely in your mind too?"

"They were part of the same dream."

"Very well, Captain Royce. I don't think it will be necessary for you to come here any more."

Nights, as summer fades into fall, I often go outside and look at the stars. They have a strange new beauty for me. The stars, and space. One night, looking up into the immensities, I glimpse Barbara's face. Stars, like diamonds, glitter in her long black hair. There is a stellar earring attached to each of her ears. Her face is black, and beautiful.

I feel a gentle wind around me. It does not come from the east or west or north or south. Its fingers touch my cheek with the lightness of a kiss. The face fades away, but I know now I am not alone. ●



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(from page 29)

## SOLUTION TO THE DEMON AND THE PENTAGRAM

Surprising as it may seem, it is impossible to draw a pentagram, no matter how distorted, without having the five angles at its points add up to exactly 180 degrees.

There is a crude way to demonstrate this. On a sheet of paper draw a pentagram as irregular as you please, then cut out each of its five points. Place them together and they will define a straight line as shown in Figure 3. Of course, this is not a proof

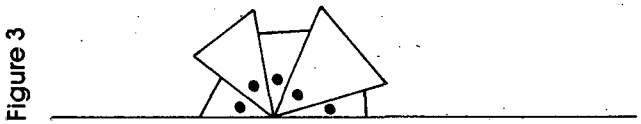

Figure 3

of the theorem. You can prove it by plane geometry, but there's a much simpler way.

Place a match at one corner, on a side of the top angle as shown in Figure 4. Slide it down the line to the lower corner, then rotate

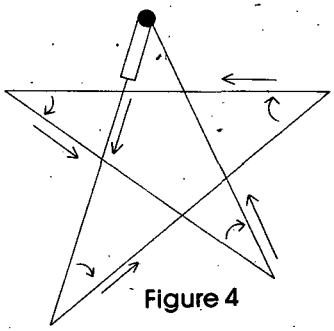

Figure 4

it clockwise as indicated by the arrow (keeping one end on the vertex) until it coincides with the angle's other side. Now slide it up the line to the corner on the right, rotate the match as before, slide it to the next corner, and continue this way until the match is back at its original position. You'll find that the match has turned upside down, having rotated exactly 180 degrees. It is easy



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to see that this rotation has measured the sum of the five angles.

The sliding match models what mathematicians call a rotating vector. The trick can be used for proving many other theorems about the angles, both interior and exterior, of polygons. For example, it will show that the inside angles of any triangle add up to 180 degrees like the pentagram. It will show that the inside angles of any quadrilateral add up to 360 degrees, those of any pentagon to 540 degrees, and so on. The sums for all polygons are multiples of 180 degrees because the match, when it returns to its starting position, can only be in one of two states that differ from each other by a 180-degree turn.

Figure 5 shows how smaller and smaller pentagrams will nest

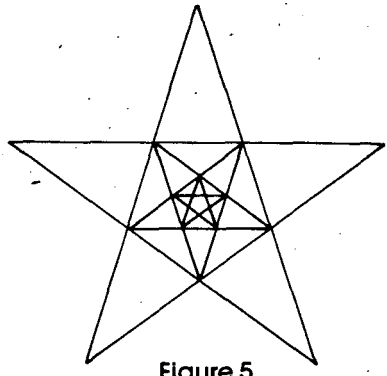

Figure 5

inside one another, a process that continues to infinity. Of course, you can circumscribe a regular pentagon around the original one, extend its sides to make a larger star, and proceed toward infinity in the opposite direction.

The most amazing property of this infinite set of nested pentagrams, a property well known to the ancient Greeks, is that the length of every line segment is in golden ratio to the length of the next smallest segment. The golden ratio is a famous irrational constant expressed by the infinite decimal fraction 1.61803398... It is the positive root of the equation $x^2 - x - 1 = 0$, and is equal to half the sum of 1 and the square root of 5. A rectangle with sides in the golden ratio is believed to be the rectangle of most pleasing shape. If you care to learn more about this remarkable number, and why it is so important in nature, art, and recreational mathematics, see the chapter on it in my *Second Scientific*



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*Book of Mathematical Puzzles & Diversions.*

The star border of a regular pentagram is concealed in the pattern shown below. How quickly can you find it without looking at the answer on page 85?

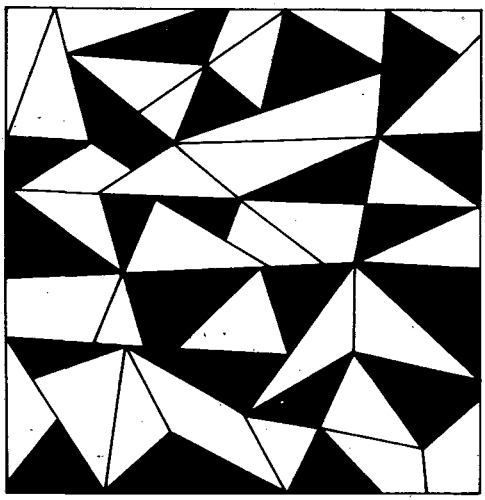

Figure 6

## GET LOST, LOWLIFE!

*NEWS ITEM: Scientists discover certain bacteria synthesize built-in lodestones.*

Cut the cackling, bacterium.
Just because you've got a home-grown compass,
While there are those among us
Who let even a turned-around street sign stump us . . .
Snicker once more, you lodestoned louse, you—
And I'll degauss you!

—Don Anderson



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# OFT IN OFFWANA

by Al Sirois and Kevin O'Donnell, Jr.

Kevin O'Donnell is the publisher of *Empire for the SF Writer*,
a magazine for which Al Sirois does freelance artwork.
Sirois is the director of the Writing Workshop,
a circle of authors in which O'Donnell is an active participant.
Sirois is a seasoned cartoonist,
and has contributed comic art to national periodicals.
O'Donnell grows bonsai
and is a dedicated computer freak.
O'Donnell's most recent novel is *War of Omission*,
from Bantam Books, for which Sirois
contributed a map of New Haven, where
the book is set.
The two men are married,
*but not to each other.*

art: Richard Crist

I don't like rainy nights; they frizz up my fur. I'd much rather be indoors, working on my thesis and nibbling on nuts. When the Directorate/Internal Security needs my skills, though, my meteorological preferences don't matter. Inclement weather might slow me down, even turn me into a misanthrope, but Dir/InSec has no agent who can do my kind of job better.

I clung to an ornamental cornice sixteen meters above Offwana's green-pebble pavement, trying to scrunch myself smaller. The stiff breeze not only made my position more precarious; it also drove rainwater deeper into my drenched fur. My ribs were wet. I was in a foul mood. The courier wasn't due for another twenty minutes.

And a bug was prowling around my ears.

It was a blue Toh-fly, separated from its swarm, and its elongated body couldn't have looked meaner. Narrow wings humming too quickly for rain to collapse them, it hovered so close to my



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face that I could see the barb of its poisonous stinger. I froze and hoped it would go away.

Toh-swarms are invidious creatures, because they're hopelessly hostile. A Toh begins, innocuously enough, as a mass of slime, a super-amoeba: a plasmodium. Mature, it measures two or three square meters and grows fruiting bodies like a mold. These develop into separate, insect-like entities linked by a hive-mind, which is motivated largely by hunger and instinctive bad temper. When they break off the plasmodium, they free it to sprout another amoeba-like bud. This possesses a well-developed brain, telepathic awareness, and avarice. It is the nexus, and it ties the three "bodies," or modes, into a functioning whole: the plasmodium for reproduction, the insectoid swarm for war, and the nexus for intelligence.

The Toh-fly buzzed around the slit of my pouch, as if investigating the guns inside. I did not dare swat it. Not only would its siblings swarm me with vengeful fury, but—if I survived—I'd get busted for Assault on an Intelligent Being. AIB is good for five to ten these days, and it's vigorously enforced, especially in Offwana. It didn't used to be, but since so many of us non-humans have taken to living in the Directorate's capital city, we've been able to pressure Dir/InSec into protecting our rights.

"Shoo," I said, "go away."

I didn't need this distraction, not when I was waiting for the courier. I knew his route but not his appearance; I was supposed to recognize him by smell. His clothes would be tagged with the scent of a Lantali female in heat, which might have caused trouble for him if I weren't the only Lantali in town. Unfortunately, the rain was damping down odors, and I had to concentrate like hell to sniff out any at all. Just to make life difficult, the moaning wind and splashing water drowned out all other sounds, and the sight I needed to find new grips was clouded. My nictitating membranes insisted upon shielding my eyeballs, and I could not reason with them.

So I hung grimly to the cornice, all four hand-feet splayed to their limits, and silently cursed the weather, the courier, and the entire Directorate. I work for the government because, officially, its merit system bars discrimination, and non-humans can advance rapidly; but that doesn't mean I'm always fond of it. Like any government, it can lie to its own employees, especially when it's torn between public opinion and pragmatism.

Take the assignment I was on: Ned Thwerkin, my boss, an Offwana-born human, had called me in late that afternoon and



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made me squat in a mis-shaped chair while he concluded a phone call. Then he'd blanked the screen, and across his round face had spread that phony smile he saves for non-humans. "Leekerchee," he'd commenced, "numba one big job me gibby you, fo' you—"

"Goddamit, boss," I'd chittered, "I have an accent because my larynx isn't shaped like yours, but I got no problem with my ears. Stop with the pidgin." He did it every time, and it burned me. His attitude was that if you didn't look like his cousin, at least, you had to be a mental defective. Give me five years. I'll be *his* boss. "What do you want me to do?"

He'd cleared his throat. "You're to bodyguard someone from a distance. Do not let yourself be seen, by anybody. The Coalition will try to intercept this courier, and if they spot you, they'll figure out who he is." Unhappiness had dulled his watery brown eyes. "Assuming they don't already know, so many goddam leaks around here . . . " He'd gone on to tell me how to recognize the courier. "Make sure he gets to Directorate/Commerce HQ."

"Why don't you just pick him up?"

"This way's more . . . private."

"Who is he? What's he carrying?"

Haughtiness replaced worry. "You have no need to know."

"Another Belter, huh?" I'd guessed. Thwerkin's wince told me I'd hit it. I'd be bodyguarding an official enemy of the Directorate, probably an employee of the Belt Federation's Foreign Intelligence Services. In other words, a rebel. "The war's gone on thirty years, boss, and for thirty years you've been making surreptitious contact with them. Why not just recognize them and be done with it?"

The Thwerkins of the world don't take advice from my kind. "You've been given your assignment," he said. "Now get to it."

It was all crap. We needed their minerals for our longevity-drugs; they needed our electronics for their 'roid-cities. Third-party neutrals had been middle-manning the trade for years, but according to scuttlebutt— "Tell me, boss," I'd asked on my way out, "is the oft-rumored agreement on clandestine trade about to become a reality?"

"Get out of here!" he'd bellowed, which had answered my question. The agreement was being signed. The object of my attentions was probably carrying it. If the Coalition for Reclamation of the Asteroids and Planets had learned of it, it would tear up the city to find him. And probably precipitate a war in the process.

I'd paused in Thwerkin's reception room to pump his secretary, who thought I was sorta cute. "Margie—" I'd climbed the back of



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her chair to rub her shoulders the way she loved "—that missing clerk from Archives, did she know about the trade agreement?"

"Uh-huh," she'd mumbled, "but you're not supposed to know."

"Well, I do." Her orange blossom perfume was good to my nose. "Is the Coalition suspected?"

"Uh-huh. Higher, and to the left. Oh, that's beautiful."

I'd had more to ask her, but the door to the inner office had flown open for Thwerkin to shout, "I told you to get out there! Get!"

"Love his style," I'd said as I hopped down. "Have a nice day, all." And shortly thereafter I was in position, ready to insure that nothing disappeared the courier before he reached the meeting place.

He was a non-human, but he wouldn't stand out. Offwana's spaceport was enormous; ships from a hundred worlds came and went daily. Over the years, enough aliens had stayed on to create a thriving Port community. Bem City was a colorful, crazy place, and its residents often wandered through other parts of Offwana. The courier could use that as a cover story; if he had to, he could also say he was lost. It was a human city, and despite all the laws against species-chauvinism, humans tended to view us as second-class citizens who all looked alike, even when we didn't. This cultural blindness makes my job easier, though. I am a small person, but it helps to be overlooked.

The wind noticed me, however, and redoubled its efforts to tear me off the cornice. I felt exposed, and a carved stone creature to my left blocked my sight. Another ornament projected out a few meters down, and I figured it might afford a better view of the statue-strewn plaza. Clenching my pouch tight, I gathered myself and leaped into the misty rain.

The projection was slippery. My upper hand-feet couldn't keep their grip. I toppled backward, out over the hard, green pavement—but my lower hand-feet seized a broken corner at the last moment. I jammed my fingers into a gritty crack and breathed again.

The view *was* better.

Gently swinging back and forth, upside down, I heard the splat-splat of puddle-hopping feet. I sniffed and got a nose full of ozone. That did not please me. For one thing, it burned! Snorting, I tightened my hold, and looked for the lightning. I couldn't see it, but my hearts beat faster anyway. As mothers on Lantali are wont to say, it ain't safe to dangle ungrounded in a lightning storm, not when your belly pouch holds two kilos of metal.



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Cautiously, I sniffed a second time. Again ozone seared my nostrils, but with it came a hormone-heating whiff of musk and a third, fainter yet familiar odor. I couldn't place it, but it didn't matter. The courier was on his way! He was fourteen minutes early; the weather hadn't held him up.

He weaved alone through the plaza's statuary, one alien among a throng of fossilized humans. The hour was early, but most Offwanans shunned rain. Damn. The plan had been for him to lose himself in the crowds.

He was a stubby creature, humanoid in shape, wrapped in a somber hood-cloak. Only his hands showed, and wart-like knobs covered them. The thin light from the lamps on the plaza's perimeter fell on dark green skin.

Well, I didn't care if the flapper looked like a toad. All I had to do was make sure he got to his destination in one piece. Unmoving, I hung like a living gargoyle, and watched him cross the plaza. Twice he stopped to look over his shoulder.

He didn't know what he was doing! Weird. It was unlike the BF/FIS to hire an amateur. Why had they done it? It must have been a budget cut. They'd probably been reduced to finding somebody on the street and saying, "Here, you, put on this cloak, and go to Directorate/Commerce HQ, downtown. Make it snappy. Get there in an hour and there's an extra fish in it for you."

He tripped over a bench; I shook my head. An old flap-bum from the Port. Just like the Belters to stuff all their giblets in one roaster. Of course, it did make sense, in a convoluted way: not many people would expect a decrepit fish-chewer to be carrying trade agreements essential to the system's survival.

Still, as the courier splashed along the pavement, I had to wonder. The Directorate was taking a big chance. The Coalition had a lot of public support. If it could prove that the Directorate was dealing with the Belt, whether or not the goods were vitally needed . . . it didn't bear thinking about.

I drew myself up and gauged the distance to the next observation post. It called for a long leap to a small ledge, from which I'd have to jump again immediately, because it was too narrow even to crouch upon. The bank-shot would ricochet me down to another ledge, a wider one, but it had to be done perfectly, without an extra sound or motion. I didn't want Toadpaw to see me and panic. He didn't know he was being guarded. Lords, he'd probably take me for a crimmo and hide in a sewer.

After computing distances and trajectories, I made the bank-shot automatically. While I sailed through space, I wondered how



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the data had been packaged, the form it was in. When the BF/FIS used mammalian couriers, they liked to inject coded molecules, gimmicked so that the courier could be interfaced with a hard-copier. We preferred unobtrusive micro-chips because they worked for all species.

I landed, and my muscles relaxed. I hadn't noticed touching on—or bouncing off—the middle ledge. That's one reason why Dir/InSec accepted me for Agent's Training: I've always been able to think two thoughts at once. We Lantali are arboreal. Operating in a three-dimensional reference plane has done things to us that the two-dimensional plane of ground-dwellers doesn't do to them.

I raised my head to check the courier's progress. He was just leaving the plaza, and shuffling down an alley between two monolithic buildings. Built by Terrans, they were devoid of ornamentation. I'd have to climb the wall behind my ledge, cross the roofs of the two Terran buildings, and find a new vantage point on the next one down. Fortunately, its facade was a display case of bas-relief. Then I hissed. The courier would be out of my sight for a minute and a half. . . . I decided to risk it.

Of course, that's when it happened.

I sensed trouble seconds before I reached my new perch. The courier still sloshed down the alleyway, but he was no longer alone.

I cursed; the damn weather had jammed me again. Stalking him was a Toh-swarm, probably the one I'd seen before. Hired assassin? Freelance mugger? I had to act as though it were the former. I inched into position and scanned the flooded pavement.

Half-submerged, the plasmodium lay at the far end of the alley like a tiger trap. I hadn't looked at the near end, but the insectoid-swarm would cluster there to cut off Toadpaw's escape route.

Damn. The vulnerable nexus was nowhere in sight. The filthy thing probably lurked in one of the two Terran buildings . . . smuggled in, perhaps? Well, it would explain why I hadn't sensed any hunger for the courier.

I was lightly armed, with one high-caliber projectile weapon and one short-range beamer. The weather had sided with the Toh, though. I could not fire a beam; the mist and rain would refract it long before it charred its target. It was useless against the insectoids anyway. There were too many of them, too diffuse. So were projectiles, for the same reason. And bullets alone couldn't kill the squirming mass of jelly. A beam could, but not under those conditions. Besides, I'd have to burn it damn fast—alerted, it would split into five or six components and scatter, and I'd have



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to get each one. Before I could do that, the insectoids would sting me into oblivion. And the courier would long since have taken to his heels. Or died.

The shining plasmodium flowed across Toadpaw's path. He hesitated, then started to back away from its rippling slime. When he turned, the cloud of insectoids drifted toward him. Through the ozone and the musk reeked his fear. He was about to die, and he knew it.

I was going nuts. The Toh was going to murder the courier. The plasmodium would ooze under the body and carry it away, probably to one of the nearby buildings. There would be no way to retrieve the corpse before it could be examined. The trade agreement would be found and disseminated. War would be as inevitable as dawn. Millions of lives would be lost. And all because one non-human had failed.

Toadpaw pressed himself against a wall and cringed as the insectoids approached. Bunched into a buzzing mass of viciousness, they were far more dangerous than the plasmodium. I had to make a move.

Eaves partly shielded the passageway from the rain, but I wasn't hopeful. The beamer couldn't fry all the bugs before they killed us. Under my wet fur, I shivered.

I could, I reasoned, as I drew the beamer and set the angle of dispersion, just stay the hell out of it and give the Toh a free hand. Suicide wasn't in my contract. But if there was a chance, even a slim one, of disorienting the swarm, I had to try it. Thwerkin would crucify me if I didn't. And so would my conscience.

I jazzed the power stud a couple of times. The READY light flickered. I started down the side of the building. One wide-angle shot from short-range could conceivably blister the plasmodium, and its pain would confuse the entire Toh for a few vital seconds. That would be long enough to mop up most of the insectoids.

They were closing in on Toadpaw, now. He cowered against the wall, hooded head swinging from right to left. The plasmodium, too, flowed forward. . . .

In range, I braced myself on a crenelation; three hand-feet made excellent contact with the wet grey stone. I raised the beamer and—

Suddenly, involuntarily, I stiffened. I think I cried out. My hand spasmed; the weapon smoked. The shot went wide, too wide, and dissipated harmlessly on the pavement. But I couldn't adjust my aim. I couldn't move. I was rigid, paralyzed by a force that had



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struck without warning. Thank God for crenelations. I squeezed it so hard I could feel each individual grain in the stone.

The same force that had me had seized the plasmodium. It curled in on itself in apparent agony. I forced my eyeballs to one side; they turned like rusted ball-bearings. The insectoids, too, had been crippled. Unable to fly, they buzzed unpleasantly as they drowned in the puddles.

The courier was unharmed. He looked from one mode to the other, rapidly, time after time. Then he straightened and pushed back his cowl. His head was frog-like, with stubby feelers circling his mouth. Peculiar excrescences studded his skull. They looked somehow familiar.

And then I had it. My tree-trained brain had put it all together without even being asked. I would've laughed if I could have.

The courier looked around suspiciously but still didn't see me, for which I was thankful. If he had lashed me with that force again . . . I shook as it faded. My hearts were hammering, and my limbs were weak; but I didn't dare call attention to myself. As long as the deep shadow of the Terran building kept me from his sight, I'd be safe.

He looked around once more, and the feelers outlining his mouth wiggled in a way that had to be a laugh. Now that I knew, I was relieved: BF/FIS hadn't lowered their standards after all.

The force died completely. The night's silence was disturbed only by distant traffic and death-buzzes from the untidy pile of insectoids. Through the damp I smelled ozone, musk, and Margie's orange blossom perfume.

Toadpaw drew himself up and walked down the alleyway, carefully stepping over the plasmodium. Then he sauntered off toward Directorate/Commerce HQ.

When he was a silhouette in the alley's mouth, I shot him. He promptly exploded. A ball of red flame vaporized his corpse.

I clambered down to the pavement before I collapsed. The plasmodium lay inert, apparently dead. That would finish off the nexus and the insectoids, too, those that weren't gone already. Mist surged all around us, and I licked it off my lips.

I don't know Toadpaw's world, but it must be a madhouse. What else could boast a dominant intelligence with an electric defense-mechanism? The Offwana zoo had some Terran electric eels, but I'd never heard of land animals with comparable ability. Lucky thing he'd unhooded himself—if I hadn't seen he was an amphibian analogue, he might have survived to destroy Dir/Com HQ.



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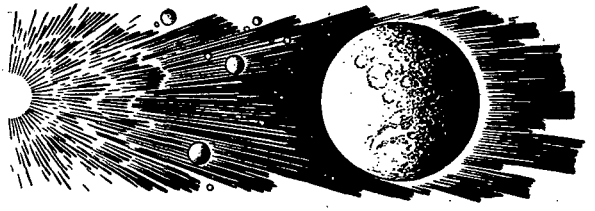
Shakily, I got to my feet and headed back the way we'd come. I just had time to reach the plaza before the real courier entered it. The pleasure of telling Thwerkin that a non-human had deduced that his secretary worked for the Coalition would have to wait. Besides, I wanted them to writhe with suspense for a while. It would serve them right. They shouldn't have used non-humans to do their dirty work.

What I couldn't figure was whether the Toh-swarm's attack had been planned—to convince me the courier was genuine—or whether it had jumbled its instructions. Either way, it was a dumb move. The electric discharge proved Toadpaw couldn't have been carrying a micro-chip—it would have scrambled the circuitry. And since the BF/FIS's injection works only with mammals . . .

Sometimes it's nice to be able to figure two things at once. ●



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# IMPROBABLE BESTIARY: The Invisible Man

I never have seen an Invisible Man.
(In fact, I don't see how I possibly *can!*)
And if *you* see Invisible Men, I surmise
There's probably something quite wrong with your eyes.
Invisible Men—if you see what I mean—
Can never be, ever be *possibly* seen.
If you *see* an Invisible Man, I would swear
That your seeing him proves that *he's not really there!*
But if *no* Invisible Men should appear
The fact you don't see them *is proof that they're here!*
(I hope that I'm making this perfectly clear.)

The Invisible Man periodically tries
To materialize in a visible guise.
He dresses himself in some visible clothes,
Then he puts on dark glasses, a pink plastic nose,
And bandages—usually *plenty* of those!
And when asked, "Why the bandages, mac?" he explains:
"Don't you know who you're speaking to, sir? I'm Claude Rains."

There's no cure for the poor old Invisible Man;
When he goes to the seashore, he can't get a tan.
The people who meet him can never tell where
His neck culminates in his head and his hair.
(He went to a barber and asked for a shave
And wound up instead with a permanent wave.)
The Invisible Man's not as shy as you think;
For he wrote me a note (with invisible ink)

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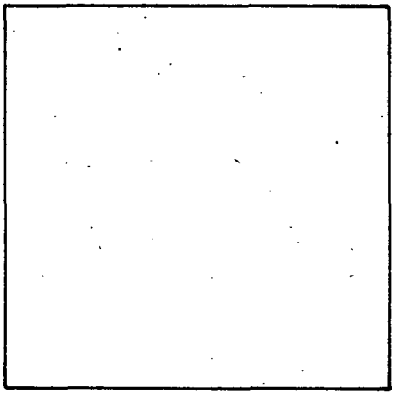
Which said: "I've consented—that is, I agree—
To come out of hiding. Just pay a small fee
And I'll send you a photo I recently took
So all of your readers can see how I look."

Yes, now the Invisible Man can be *seen!*
In the pages of this very fine magazine.
In accord with our editor's plan.
So come on, then, let's go:
In the photo below
We present . . . THE INVISIBLE MAN!



**—F. Gwynplaine MacIntyre**

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# SWEET SONG OF DEATH

## by Stephen Kimmel

art: Robert McMahon

**Mr. Kimmel is 32 and is a chemical engineer. He and his wife, Georgia, have one 4-year-old son, Robert. He is a contributing editor to the magazine, *Creative Computing*, and has one novel which is searching for a home.**

"Sir? Could we continue, please?" Carol asked. She pressed the button on the recorder that sat in the center of the room's single white table.

"No!" David continued to stare at the age spots that covered the back of his hands. Bones seemed to protrude and the skin to hang



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from them like wet cloth. His yellowed nails had grown thick and cracked with age. Now they seemed determined to leave his fingers.

"I don't want to talk about it anymore," he said. He glanced up just in time to see Carol snap her head and send a cascade of black hair pouring over her shoulders. He looked away from her. He hated young people. He hated long black hair on the shoulders of blue nursing-home uniforms. He especially hated government nursing-home workers with their constant smiles and their sickeningly sweet, "My don't we look bad today."

The concrete block walls of the nursing home were painted dirty ivory white. There were no windows to interrupt the relentless sameness of the room. It was illuminated by a single bare bulb hanging from a frayed wire in the center of the room. The only color in the cubicle was Carol's uniform and last year's Christmas cards from people David didn't know or care about. God, he hated the nursing home! And those two ingrate sons who stuck him here waiting for him to . . . No. He didn't want to think about that anymore.

"If we're going to send you back, we'll need these details," Carol said. Her voice softly tugged at him. His eyes found no refuge and were drawn back to her. "You do want to go back, don't you?"

"Yes . . . of course . . . damn it. But do we have to talk about? . . ." His voice faded away.

"Lynda's death?"

There. Now she'd done it. The muscles in his face tightened as the barely repressed feelings broke loose. He hated people who talked about death. It wasn't that he feared death. Death was annoyance and little else. Death was a pair of black pills that came with every meal when some blue uniformed worker would suggest that it might be easier and God knows how much cheaper. Death was his former roommate at the other nursing home who had hacked all that last night. Months later David was still covering his ears with the dirty pillows. He could never seal that sound out. Death was the blind woman who had impaled herself and gurgled as the redness poured across the linoleum floor. The blue uniforms had been upset at that.

He was stuck in the home to wait for Death because there wasn't anywhere or anything else for him. He hated Death because it was the only reality of life that was left to him. It was the only reality they would let him have. No seasons. No pleasures. The nurses would beat him and strap his wrists to his bed every time he got an erection. He wasn't supposed to have desires. He was supposed to die. The only pleasure he had left was annoying them by not dying. Death was the man who . . .

"We have to talk about Lynda's death. Because we want you to



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change that . . . to prevent Lynda's death."

"Will I be able to prevent it?" he said. His voice was almost pleasant. Thinking of Lynda was much more pleasant. Lynda was perfection made flesh . . . that perfect body . . . that gorgeous hair. His eyelids scraped over his eyes as he closed out the nursing home to see Lynda more perfectly. He could almost see the long blonde hair just barely hiding her breasts as she bent over to kiss him. Even after two sons and a daughter, her figure was still perfect. Soft-spoken and gentle. Loving and understanding. Kalyn would have been just like her mother if only . . . only . . . Dumb accident. Death had taken them both. Dumb damn accident. Why had he done it? Why? Why?

"We think so. If our hypothesis is correct and the Corvini-Langstrum effect is a form of time travel . . . then you may be able to change the circumstances and prevent her death. *May* be able to. There may be a conservation of reality as some have suggested. You may find the events are beyond your ability to change. Then we'll have to study your memories to find out why."

"I don't understand what you're saying. . . ."

"Earlier travelers have been unable to change anything about the past. There is no concrete evidence that Corvini-Langstrum is anything but a form of hypnotic suggestion. We selected you because we felt you'd be highly motivated and have the ability to prevent your wife's death . . . to change that fact of the past. If it is possible, you should be able to do it. When you return to the present, we hope these records will be in error. That will be the proof we need."

"And frankly, I don't care . . . if there's a chance . . ."

"There's a chance. At the least you'll have reinforced memories of more pleasant times," Carol said. Her smile bent the lavender lips. David had to smile back.

"Then to hell with the questions. When do I leave?"

"Tell me about Lynda's death."

David watched the long thin fingers press the buttons on the tape recorder. David swallowed the dust that caked the inside of his throat. He had pictured it many times, though he had never seen it. He hadn't even gone to the funeral. He knew exactly what the twisted blue metal encasing the two torn and broken bodies had looked like; what the shattered glass and the red was like. He knew, and he didn't want to think about it. David swallowed again. There was no avoiding it this time.

"Lynda took Kalyn to visit a friend named Georgia," David said finally to the microphone.



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The trip from the government nursing home to the university took only a few minutes. David spent most of the trip with his cheek pressed against the chilled glass of the car's window. The fall leaves were much better than David remembered them. Fall? Could it be fall already? They carried him up the steps rather than wait for him to decide what the grey things in the sky were. David resisted, protesting that they were in too great a hurry. They nodded pleasantly and picked him up. They left him in a room where the walls and the ceiling were covered with green pyramids. The light ebbed from the pyramids.

"If you'll take your place," Carol said. She waved her hand toward the cylinder that dominated the room. David ignored the pyramid walls as he strained and forced the old muscles to walk the five steps from the door to the cylinder. He didn't care about the pain in his knees and his back. He didn't care about the pyramids. The cylinder was going to send him back to a time when he was young. The cylinder was all that mattered. He touched the glass upper portion and the cylinder rotated with a hiss. It opened like a coffin.

"Do you need help getting in?" Carol asked.

David sat on the edge of the platform that was the open top cylinder. He lifted his legs slowly. Carefully he eased his body into the padded and felt-lined interior of the machine.

"No."

"Ready?"

"Yes."

"Think about Lynda's death," Carol said. She pushed a button on the console. The lid to the cylinder snapped shut. "Think about the accident that killed your wife and daughter."

"I'm going back," David cried out against the glass. His words rattled around the chamber. "I'm going back. I don't want to think about death anymore."

The walls began to shift in color. Greens to yellows to oranges to reds to purples to blues. Faster and faster they shifted until they blurred into grey. The sagging skin began to tingle. He felt the push on his cheeks as he sank deeper into padding. David knew he was on his way. He tried to hold his eyes open. Despite his best efforts, he fell asleep.

The first thing that David noticed was that his eyelids didn't scrape across his eyes when he opened them. Two blinks and a moment to focus and then he noticed the bug-flecked white globe hanging from the ceiling. He sat up. It took no effort at all.



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"My room!" David said as he sprang from the bed. The blue and white geometric wallpaper was just as he remembered it. He turned and stared at the red maple headboard, the bookcase and nightstand. It was all his room just as it was fifty years ago. His fingers grazed the blue felt of the foam chair he had to sell years ago to pay doctor bills. He stopped and pulled his hand up to examine it. The wrinkles and the age spots were gone. There was light brown hair on the backs of his hands. The fingernails were dirty.

David ran to the bathroom and watched the mirror, secretly expecting the young face to melt away with age. It didn't. There was plenty of twisted, stringy, dirty brown hair.

"Hot tuna! It worked. I'm back," David said to the young face in the mirror that stared back at him. He remembered when he saw the panties in the center of the room and the bra hanging across the back of the chair. His throat tightened, and he had to force a breath out.

"Lynda! Lynda! Where are you?"

David moved quickly to the door. He started to yell again, but he stopped when he saw the doll lying face down in the shag carpet. He stooped and picked it up. He hadn't done that before. He smiled at the certainty that he could in fact change the past. The plastic skin was cool and smooth. He almost cried. It would work! David fought to control the emotions that were threatening to overwhelm him. He took a deep breath to steady his nerves. David could nearly taste the flowers, the burnt coffee and the underdone toast.

"Lynda!" he said as he walked to the kitchen. She sat at the table with her face covered by her hands. Her hair was rolled in a zillion curlers. Her housecoat was an ugly, dirty terrycloth thing that made her look as though her body was a pile of broken bricks.

"Lynda?"

"Will you be quiet, for God's sake?"

This was the woman he'd married because she missed a period. This was the woman who was making his life hell. He pushed aside the old feelings that seemed to pour over him. He looked at her carefully. She was exactly as he remembered her being: hungover. He set the doll on the top of the refrigerator and sat at the table opposite her.

"Good morning, sweetie," David said. He forced a huge smile. She didn't look up. "It's a beautiful morning . . ."

"Jesus," Lynda said to the half-full coffee cup.

"Take a moment to appreciate how wonderful life is . . . listen to the birds . . . smell the flowers . . . things are beautiful."



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"You're making me sick. You sound like a damned sermonette."

She looked up at him with bloodshot eyes. He was startled by the hate he felt in her eyes. The muscles in his arm tensed. David was shocked at the urge to hit her. He took a deep breath.

"It is a good morning."

"I have a migraine."

"We have three beautiful children."

"Two monsters and a sickly girl."

"Why are you doing this?"

"Oh, shit," she said. She stood and stomped out of the kitchen and down the hallway.

David sat at the table turning a piece of toast over and over. There was an emptiness that made him feel as though someone had stolen his best memories. She was right. The two sons were monsters. If he remembered correctly, at this moment they were nailing a frog to a tree in a backyard. Something was wrong. Maybe he could get Lynda to take the boys when she . . . No! He didn't want to think about that.

He felt two small arms lock onto his leg. He knew he could break the grip only by picking Kalyn up. Again.

"Daddy!"

He picked her up and whirled her over his head. She laughed that gorgeous little-girl laugh. He kissed her and set her on the floor again. His smile faded as he saw an image of twisted blue metal wrapped around two broken bodies.

"Daddy? Love you," she said.

He ran his fingers through her golden hair and brushed it to the side of her head.

"I love you too, smallstuff," he said, exactly as he had said it years ago. "Go play. Everything will be . . . fine . . . go play. I need to talk to your mother."

She smiled and ran away just like she had years ago.

David stood and walked back to the bedroom much slower than he had before. Lynda was dressed and packing a suitcase. David stood against the door jamb and watched her.

David could see what would happen. It was just as though it had just happened. They would argue. He would beat her. She would announce that she was leaving him. He would beg her to stay. He would hit her again. She would take Kalyn and drive away. She would ignore the light at the corner of 41st and Yale and some fellow coming out of the shopping center parking lot would hit them and . . . then the guilt would start. It was his fault. He knew it.



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He stopped the playback, refusing to let the memory play its course. That was what he wanted to change. He would rob Death of Kalyn and Lynda. He would say something different. He would expunge the guilt. He hated Death. He would change the past. Then he saw how simple it would be. All he had to do was not argue with her. All he had to do was to walk away. It was the fight that set the timing. His feet wouldn't move.

"I'm sorry," he said. She paused, planted her fists on her hips and stared at him.

"The hell you are."

"I mean it. I'm sorry."

"You're sorry. You're sorry. You always say that. You always mean it," she said. She pulled open a drawer and threw clothes at the suitcase. "Except you never really mean it. You mean 'stop bothering me, I don't want to talk about it any more.' That's what you mean. You refuse to face problems until they bite you. Well, klutzo, one just bit you. You'll never change."

"I'll change. Honest," David said. He could feel his blood pounding in his ears.

"Shit."

"I don't want you to go."

"You want me to stay so I can wait on you hand and foot? Forget it. I'm not waiting on you anymore. We're through. I'm leaving."

"You'll die if you do," he said and instantly regretted saying it. This wasn't turning out right at all. He'd forgotten how complex the problem was.

"Is that a threat?" She laughed a harsh, nerve-grinding laugh. She shifted years before his eyes. He saw her as an old woman; as a cackling broom-riding witch. She would be horrible: She would plague him for years. "Or are you saying that I'll just wither away without your sweet presence? Bullshit!"

"That's not what I'm saying. . . . You'll have an accident if you drive by the shopping center," David said. He stepped toward her. His touch always softened her attitude before. Perhaps it would now. She pulled away from him.

"An accident. How ominous. Dynamite under the hood? That doesn't sound like you. You don't have the balls for that," she said. He prayed for time. That was all he needed to work out the problems. Just a little time. Walk away, he shouted at himself. Walk away right now. The muscles in his legs tightened. "I'm going to George's and I'm taking Kalyn with me."

"Yes. Go to Georgia's. But wait a minute or two before you go,"



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he said. The words echoed in his ears for a moment. It had taken hearing it twice before he caught the difference between what he had said and what she had said. It hadn't been Georgia. It had been George. His mind was suddenly clear of indecision. "Who the hell is George?"

"George is a damn sight better man than you'll ever be," she said. She slammed the suitcase shut. "In the sack or out."

David's fist zipped out and caught her face. She shrieked as she fell to the floor. David straddled her. He hit her again and again and again on the face and the breasts. She tried to protect herself with her arms, but he swept them aside.

"To hell with the accident. I'll kill you right now," he screamed at her. Then he realized that he was beating her exactly as he had done fifty years ago. He fell back silently against the wall. His stomach wadded itself into a knot of guilt and he stared at his hands. He was doing it all again. He wouldn't be able to save her. He didn't even want to now. He was helpless.

She grabbed the suitcase and ran to the door, just as she had before. David knew the future. Guilt, unemployment, alcoholism, guilt, two ingrate sons, cirrhosis of the liver, cancer of the everything else, guilt, and a government-operated nursing home where the aged were left to sing their death songs, encouraged by the state to be short and sweet about it.

He heard Lynda and Kalyn argue. Kalyn began to cry. He would save Lynda just to avoid his future. All he had to do was to delay her. David ran to the living room. He would tackle her and hold her for a few minutes. It would be simple. He slipped as he turned the corner.

"Lynda! Stop!"

She spun as he dove for her legs. The suitcase hit the side of his face. His arms grasped at the air. He tried to rise, but his knees were still weak. The door slammed and the car started. He pulled himself to the door and screamed.

"Lynda! Come back! Please!" he shouted through the screen. The car pulled away and drove down the street much too quickly. "Just a second! Just one lousy second!"

The wire of the screen etched tiny squares into his cheek. His face was wet with tears. He had failed. He had killed them twice now. It didn't matter that she deserved to die. He had killed her again. He would have to live with the guilt twice now. Suddenly the black pills seemed like a good idea.

"Daddy? Where's my doll? Why did Mommy leave me? She said



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she was going to take me to visit a friend. I wanted my doll," Kalyn said with tears running down her tiny face. "I don't want you and Mommy to fight anymore. Why did Mommy leave me?"

An old man in a young man's body turned away from the screen.

His eyelids scraped open. His eyes adjusted slowly to the light. The room was just like he remembered it. The room still had clouds painted on the ceiling. The large windows were still carefully shaded with pale beige curtains.

"How are you feeling?" a young woman's voice asked.

"Tired."

"How was it?"

"Wonderful and horrible," Dave said. He let his body sink further into the mattress. "Did you decide whether the Cosa Nostra effect was really a time trip?"

"The Corvini-Langstrum effect? That's a common impression. The illusion of time travel exists because of the strength of our emotional involvement in our memories. You wanted to change the past badly. So you relived it and got your chance to change things," she said. She snapped her head, sending cascades of long blonde hair pouring over her shoulder. "Your 'trip' was like hundreds of others . . . a powerful replay of your memories. Corvini-Langstrum just helped you work out the problem. It was simply a deep hypnotic trance. Just another psychological tool."

"I didn't change the past."

"No."

"But the records . . ."

"Your records are all the same," Kalyn said. She pulled the manila folder from her satchel. "You retired six years ago after working thirty years without missing a day. You've never been sick. You've lived here for the last three years with Joe and me. Nothing has changed. . . . Except your feelings about what has happened."

"No change." David released the breath in a soft whistle. Yes. That was the way he remembered it.

"Care to talk about Lynda's death?"

"What would you like to know?" David said. He rolled onto his side and propped his head on his hand. "It was inevitable, I guess. The problems were so deeply rooted that I probably couldn't have done anything about it that day if I had tried . . . unavoidable . . . perhaps even desirable. . . . Death is just another fact of life."

"Whose fault was it?"

David waited to answer. It had been his fault. If he had been a



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different person . . . But then it had also been Lynda's fault. Maybe . . .

"No one's fault. It just happened."

"Good," Kalyn said with a huge smile across her face. "Although I'm going to reserve judgment on the desirability of Mother's death. . . . You're doing very well. The treatment seems to have been effective."

David glanced at the lamp next to the bed. There seemed to be something missing . . . something small and black.

"Do we know anyone named Carol?"

"I don't think so."

"At the University perhaps?"

"Not in my department."

David was quiet as he considered asking further questions. The questions seemed silly somehow, like a half-forgotten dream.

"I'm tired," he said. "Maybe I'll die soon."

"Why don't you take a nap, Father? Corvini-Langstrum can be a very draining experience. Dinner will be ready in a few hours . . . and don't worry about dying," Kalyn said. He felt her lips press softly against his forehead. "You'll live to be a hundred . . . maybe two."

Kalyn closed the door behind her. David shut his eyes and dreamed dreams about a small girl growing up. Somehow the dreams all seemed new. ●

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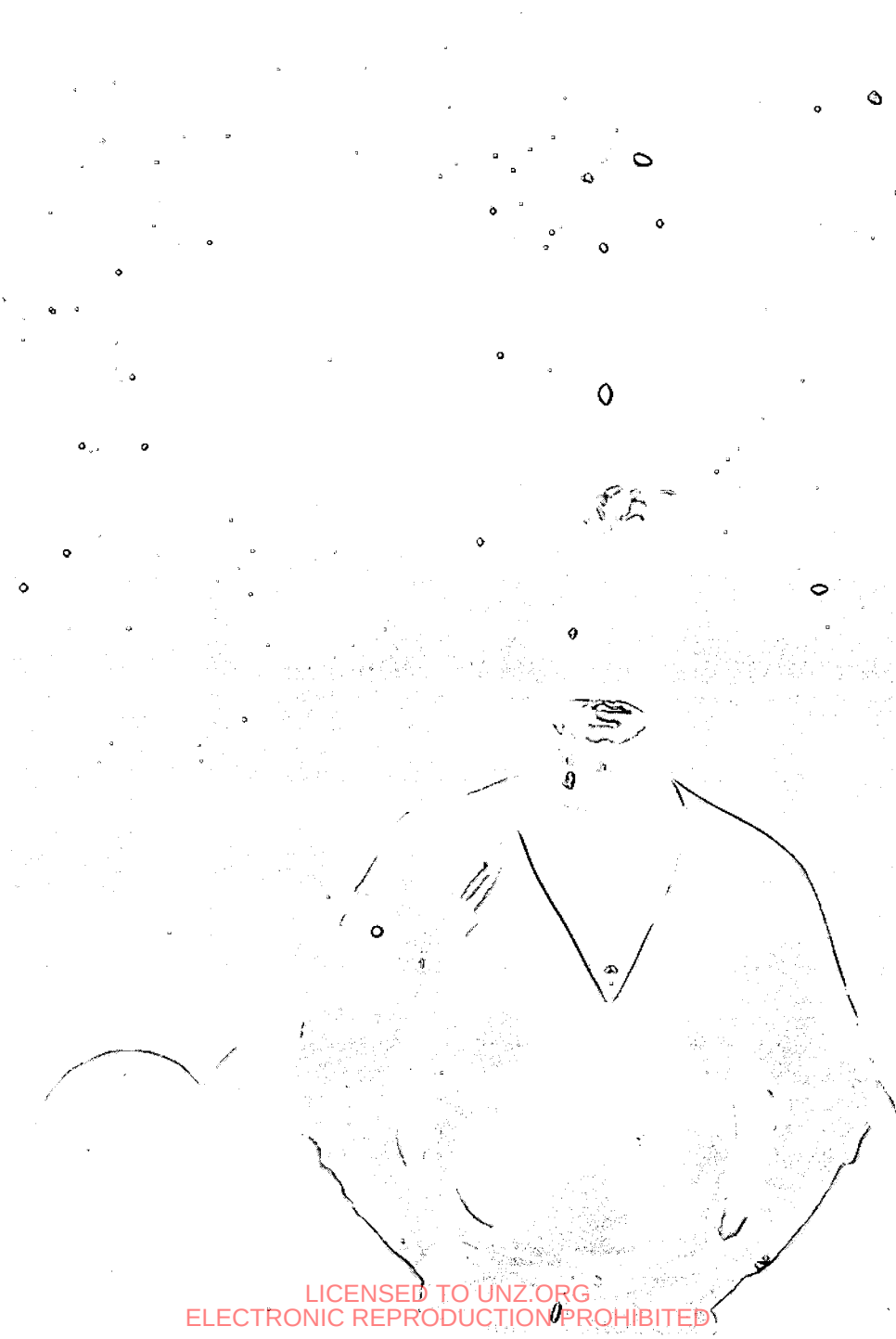

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# THE CRYSTAL SUNLIGHT, THE BRIGHT AIR

by Mary Gentle

The author lives in Dorset, England, and to date has made three sales to *IAsfm.*

art: Ray Lago

Paul Broderick came to Orthe a haunted man.

You'll have no trouble, the Intendant who briefed him promised. Orthe's a regained world. There were Earth settlements on it before the Insurrection. The natives are used to humans.

Go down, Broderick. Find out if this world needs the Interdict.

Haine's Star scorched down on Orthe, on Kasabaarde's narrow streets, reflecting back from the white domes and ankle-deep dust. The acid light bit into his eyes, even behind the face mask's protective glass. Dust irritated his skin. He quickened his pace towards the wall separating trade district from inner city. If there was cause for the Interdict, it had to be there. Nothing outside the wall was unusual—after the Insurrection. An agricultural society living in the ruins of a high-technology past . . .

Wind brought the smell of marine life from the harbor, close by the gate. Sunlight fractured off the sea like broken glass. Broderick approached the Ortheans at the gateway.

"You wish to enter the inner city?"

His hypno-trained mind translated the breathy sounds and sharp clicks. He answered as well as he could.

The Orthean who spoke was a head shorter than Broderick. Bleached skin under the city's dust showed a hint of scale-pattern. Masked—as all Ortheans were outdoors—there was only a glimpse of eyes set widely apart under a broad forehead. Under the mask's edge, thin lips curved in a reptilian smile.

"Wait," the humanoid said. Pale hair was caught up in complex braids; as she turned to consult the others he saw the mane was

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rooted down her spine to the small of her back. A length of cloth wrapped her narrow hips. Thin ribs were prominent. Small breasts were set higher than the human norm, and a second pair of rudimentary nipples were visible on her lower ribs. He noted the seamed belly. Oviparous.

"It is permitted." She faced him again. "Touch the earth."

He knelt and touched the dry ground, and when he stood she took a bowl of water from another Orthean and offered it to him. He drank, indifferent to infection.

"If you have weapons you must leave them with us. They will be returned to you when you go."

He carried a knife for just such occasions, and gave it to her. The weapons he carried wouldn't be recognized on a world like this.

"Is there somewhere I can stay in there?" he asked, as they registered his name and possessions in the gatehouse. "Somewhere cheap?"

"Anywhere." Her six-fingered hand flicked out, a gesture including all the streets and domes beyond the wall. "All the Order houses are open to you, Outlander. Open and free. There is no gold in the inner city, not for strangers, nor for us."

" 'Free'?" Broderick said, appalled; and when they had translated it several ways so that there was no mistake: "*free?*"

And then:

*What are you doing here, Paul?*

No, he thought. No! Not again. Don't think about it—

*What right does the Holy Dominion have over this world, what justification for the Interdict? Why, Paul, why?*

His haunt was a woman-shaped emptiness visible on the air, distorting the pale sky and squat buildings. Grief and doubt threatened to overwhelm him. He stifled the remembered voice.

Broderick entered the inner city of Kasabaarde.

When Clare Felix died the whole world grieved.

They told Paul Broderick she was dead and he didn't believe it. He heard and smiled: it was a fiction, like the games he and Clare played. A world couldn't exist in which she could be dead.

They thought they made him understand. He understood. The shock blinded and deafened him, but not for long. News of that death would have touched him, he thought mechanically, if he had been dead himself.

He went out blindly into the streets of the megalopolis, into the dust and fumes of a wholly inappropriate summer day. In the



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crystal sunlight, the bright air, he stood trying to realize it: Clare is dead. Is dead. Clare is dead but the world's still whole, I still exist, and Clare—

—is dead.

He walked past familiar crowded shops. The news was out by then, satellite-broadcast to the world. On the faces of people he passed, he saw a shadow of that raging grief.

He didn't notice when it began, but after a time he knew that in every shop he passed the tapes of Clare Felix's songs were being played. The music and the words that she had sweated over, snarled at him for interrupting, hummed when they loved—those songs were coming out into the dusty grieving city.

He might have run. He found himself, gasping for breath, in front of a public newsscreen. The dead woman's voice sang out under the noise of traffic, the rumble of the distant starport. People slowed, hesitated, listened; a girl cried. Lines of type formed beside her picture on-screen. Her kind of death would have attracted attention on Parmiter's World in any case: they tended to long lives, not massive coronaries at twenty-seven. Being who she was . . .

Broderick read the customary closing line with a new razor-edged attention. '*She lives in the union of the Holy Dominion; her spirit is with us forever.*'

He waited for the comfort that always brought him. It didn't come. When the weeks turned to months, he realized it would never come.

Wider streets opened here, still with the cloth awnings stretched from dome to dome. The shade was welcome. Sweat tracked down between his shoulders. Few Ortheans moved in the noon heat; they sprawled on the steps that led up to the domes, or sat with their backs against the dome walls and stared into space.

Broderick walked for some time down the avenues. At last, having no better guide, he chose a door at random; pushing through the bead curtain and entering the bright room beyond.

"Welcome to Thelmithar." A male Orthean paused at the head of a flight of spiral steps. He was darker-skinned than many, his mane receding from his brow until there was only a white crest left. His movements had the carefulness of age.

"Is there somewhere I can eat?" Broderick asked.

"Of course. Will you stay here?"

It was as good a place as any, he thought. "Yes."



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"Come with me. I'm Surinc," the old male said. "Ask for me if you need anything."

Broderick followed him down the spiral stairs and came into a bright underground hall. Silver light reflected diffusely from mirrors set in the vaulted roof: sunlight directed down from above. A young Orthean played the twin-flute in a corner. The tables round the still pool were mostly empty. Children scuttled past, sparing him curious glances.

He ate what time in the trade district had proved unlikely to cause allergic reaction: breadfungus, *brennior*-meat, and *arniac*-herb tea. When he left the table, he called the old Orthean.

"I'll pay for a room now," he said, testing.

The thin lips curved. Surinc weighed the cord of metal beads that passed for money in the trade district and handed them back to Broderick.

"You will be an Outlander, then, not to know there is no payment in the Order houses. Here at Thelmithar—and Gethfirle, Cir-nanth, all the others—they'll feed you, house you, clothe you if you desire it. Freely."

"For how long?"

"As long as you wish to stay."

His mind protested, *nothing's free!* "If not money, then what? Labor? Information?"

The old Orthean unmasked. Broderick saw his whiteless animal eyes, and the nictitating membrane that slid slowly across the slit pupil. Those hooded eyes held indefinable amusement.

"We're fortunate," he said. "All who travel up the Desert Coast to trade must pass through Kasabaarde, and also all who come down from the north and the islands. All who pass us pay. The Order houses have tolls and taxes, Outlander. They can afford the inner city."

Broderick shook his head. "Why give anything away?"

"If you have to ask, why have you come?" The tawny eyes veiled. "We give only one thing—time. Come here and we free you, feed and house you; but what we give away is time."

*This*, Broderick thought. *If anyone can come here, and not have to work—this is why we're considering the Interdict.*

"Time for what?"

" 'Idleness breeds violence and vision,' the Orders say. There are other values besides what you wear on your back and put in your belly, Outlander. Thelmithar can give you time—what you do with it depends on what you are."

"Violent or visionary?" It was an involuntary, cynical remark.



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Surinc's six fingers linked in a complex gesture. "I can't tell you what you'll find here. If I could, it wouldn't be the true illumination."

Reduced to simplicity, Broderick protested, "People can't just do nothing!"

"No, indeed. Most can't. But those who can. . ."

Left alone, Broderick sat for a while, then felt driven to go back up into the open air. Under the awning's shade, many Ortheans sat on Thelmithar's steps. Come from both continents? Broderick wondered. The concept of the inner city stunned him. It was dangerous.

*And will you bring the Interdict down on this city of philosophers?*

He shook his head to clear it, but couldn't rid himself of the caustic, loving voice of the dead woman.

Broderick left Parmiter's World a scant few weeks after Clare's death. Her face stared down from newsscreens, her voice followed him in the streets. He left because he knew he'd never hear her songs offworld, never hear her name.

Clare Felix's songs and music were under Interdict.

"How can they do it?" she'd raged. "I'm good, Paul. All over this planet—"

"Too good," he admitted. "Too strong, if you like, for the average mind."

"Intendant!" She snarled it like a curse. "What's the Dominion afraid of? Think there'll be another Insurrection if Felix sells offworld, that it?"

She was acid, dismissing his explanations. She didn't want explanations, only justice.

"How can I communicate? I know I can reach them on other worlds—they're different from us, yes, but I can touch them—feel the way they feel, make them listen to me when I sing!"

"How do you think the Insurrection started?" Broderick asked. "Something in the mind responds, philosophy and religion spread from world to world, psychic epidemics—man tends to chaos. If the Dominion didn't keep the Interdict on that—"

"So you interdict religion, politics, art, music . . ." She sat hugging her knees, knuckles white. Tension drew the brown skin taut over her high cheekbones, sharpened the line of her mouth. "You've put me in a cage."

And so he left that cage, Parmiter's World. His fear and hope was that passing under Interdict might wipe out his feeling for



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her, and the doubt that gnawed him. It did not; it left him more hollow than before.

He went out by way of the Dominion orbital station, traveling on a Dominion ship—there was no other way to travel. The Interdict—a combination of hypnosis and aversion therapy—didn't destroy memory. It implanted a strong disinclination to communicate the Interdicted subject. Perhaps what it did, Broderick thought, was kill the belief in a thing; so that after he left Parmiter's World, Clare glowed bright in his mind, but her music was only noise.

Something with terrifying potential, the Interdict, and so only to be trusted to the highest power: the Holy Dominion. . . .

But that was when I believed in the Dominion, Broderick thought. Now who do I trust?

*You came here to judge. So judge.*

Broderick knew he was hallucinating. Nevertheless Clare Felix followed him from Thelmithar to Cir-nanth, from Cir-nanth to Gethfirle, and from Gethfirle to the Order house Durietch.

The curved wall of Durietch was hot against his back. The scent of *kasziz*-creeper filled the air. In the past week Broderick had heard any number of philosophies, many varieties of mysticism. Any Intendant would recognize at once how dangerous Kasabaarde's inner city was, breeding such things.

"Outlander," said a young Orthean near him, "what do your people believe in?"

The creed came to Broderick's mind: 'I believe in the Dominion, in our immortality in the union of spirit; I believe in the Peace of Mankind, and in the holy instrumentality of the Intendants—'

I believe Clare Felix is dead.

"I don't know," he said.

"I left the Islands for much the same reason." The Orthean's skin shimmered, crystalline. "I thought I might find an answer here."

"Have you?"

"I don't know. Perhaps."

Dangerous, Broderick thought. If the inner city's principle spreads. An epidemic of fads, philosophies, cults, heresies. No Intendant should hesitate. *Interdict!*

He missed one ship's pickup date, and the next one too.

A fight began without reason, and finished as rapidly; a brief scuffle. No one moved to stop it. Broderick, caught in the fringes,



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rubbed skinned knuckles. Few of the crazies would tackle the Outlander, as a rule. He left Durietch all the same, walking back through dry alleys to Thelmithar. The egg-basket domes of the inner city blazed white against the pale sky.

*When are you going back, Paul?*

Now it was movement out of the corner of his eye, creeper fronds that mocked the line of her throat, the turn of her head.

You had no business sending me here! This needs an Intendant with faith, not a man who doubts everything!

Clare, Clare, Clare is dead. Known for so long, so familiar; lived with so close (Broderick thought) that you couldn't say I loved her, you'd have to say we were part of each other. So that death is amputation. Without reason. No, no reason. All the Intendant principles: peace, power, and love . . . all of them hollow. Measure it up against her death and what answer's left? Nothing.

*Self-pity,* Clare jeered. *And selfishness. How many times have you thought of suicide? Paul, Paul, and you always told me you believed in the unity!*

He sat on Thelmithar's steps, among the tranced Ortheans.

*Work, Paul—are you going to waste your life?*

He retained a lunatic hope that it was a real experience. That it was Clare in communication from the unity. But however hard he begged her, she wouldn't sing. Then he resigned himself to the fact that it was his own mute mind producing her image.

Clare, I miss you. All our lives together wouldn't have been long enough. I miss your touch, your smell, your love. There are so many questions I wanted to ask you.

The last pickup date was close. Broderick, restless; went from Order house to Order house, questioning those who thought they'd found some illumination, some revelation in the inner city. To any who would listen, he spoke of Clare Felix.

"We're not so intense," one elderly Orthean woman said. "We love many times. But you . . . better to have had her a short time than not at all."

Another, so young he couldn't tell if it were male or female, said, "The earth is. The stars are. The wind blows and the land grows. What more should there be, Outlander?

Passionately, he said, "It doesn't answer her death!"

"I'll die," the young one said. "So will you. Does that thought disturb you?"

Broderick laughed at the irony. "No."



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"If you can forgive the universe for your death, then forgive it for hers. Her death is her own, not yours."

He left them, unanswered. The ever present dust worked under his mask as he wandered the streets, irritating his sore eyes. Fury possessed him. Sometimes he shouted aloud. No one took notice of that. He was not unique in the inner city. The short twilight passed, and the fierce stars of the Core blazed in the night sky. Heat radiated back from the stone walls. Broderick kept walking. He crossed and recrossed the inner city, ignoring fatigue. The stars turned in the moonless night.

Dawn found him on the steps of Cir-nanth, dully watching the sunrise. Fatigue blurred his mind. His body ached; he had walked all the long dark hours. Light flooded the face of the dome. A dawn wind blew off the sea. Broderick eased himself down to sit by the bead-curtained door.

It happened then. Between one heartbeat and the next, welling up in him. His eyes stung, wet. He reached out and touched the mortar crumbling between the curved stone blocks, the dead leaves in the dust beside him. He saw the flaring light of the sun and the pale glory of the sky, felt the salt-laden breeze. Felt the breath in his lungs, the beat of his heart, the blood in his body. The pulse, the rhythm . . .

Nothing was changed: Clare was dead. Everything was changed: he was alive.

Broderick drew breath, shook his head in amazement; looking at her death as if it were a thousand years ago, and at her life as if it were a miracle. All the people she had reached out to—!

The inner city said to him: The world is. You are. I am. This is all there is.

And if this is all there is, Broderick slowly pieced together his conclusion, then all that's important is communication. To know ourselves and to know others. Reach out, touch: love. The past and the future don't exist. What matters is us, alive, now.

In Orthe's dawn was a pinprick of falling light, no morning star. The ship. If he didn't leave willingly, they would take him. And take it as further proof that the Interdict was necessary.

"You're our litmus paper," an Intendant once said to him. "We drop you in, stir you round, and pull you out, see how you've changed. How else can we judge the really powerful effects on the human psyche?"

On Orthe there are two populated continents where a man might vanish. On Orthe there are remnants of a high-tech civi-



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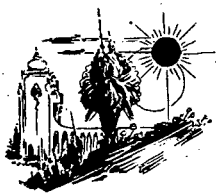
lization, a star-traveling people. Broderick watched the star fall. If a man should build his own ships . . . ?

It would not be the first time someone had gone up against the Dominion. He would most likely fail. Even if there were—as he thought there might be, later—others to carry the word, failure was still probable.

Will you put music in a cage? Clare Felix had asked.

Broderick put on his mask, and walked on into the long morning shadows of that alien city. ●



## MARTIN GARDNER

(from page 53)

### SECOND SOLUTION TO THE DEMON AND THE PENTAGRAM

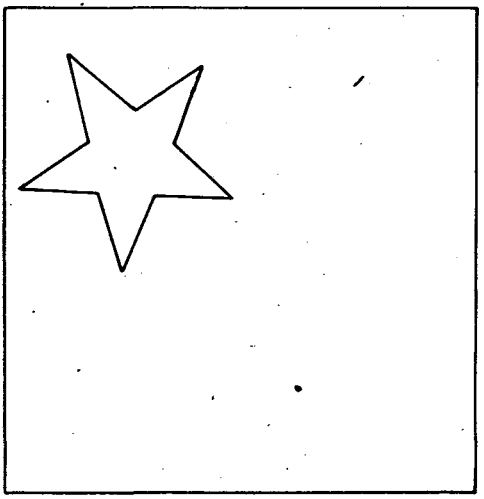


Figure 7



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# EAT MOTEL

by Steven Bryan Bieler

The author of "Good Golly, Miss Molly" (*IAsfm* November 1982) now offers this spine-tingling tale of total horror on our nation's expressways. Eeeek!

art: John Pierard

The Portland Roller Derby Tournament ended unexpectedly late. Interstate 5 heading north was four lanes of blacktop and a few cars poking their hi-beams into the night. We were tired and hungry.

"Look over there, Vern," CoCo said. She pointed at an enormous neon sign standing above the forest. The big red letters said **EAT MOTEL**.

I signaled a right and headed the Camaro for the exit. That no-nonsense message appealed to me. I don't like those fancy places where they give you six spoons and two napkins and expect you to know what to do with all of them. I like simplicity: one knife, one spoon, and one jar of mustard.

I pulled into the parking lot of the **EAT MOTEL**. A motel was on our left, a restaurant on our right. I could already smell the french fries, as alluring as CoCo's best perfume, El Spud. I was hungrier than ever!

The Eat half of **EAT MOTEL** maintained strict standards. The sign on the door plainly read SHOES AND SHIRTS MUST BE WORN.



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Inside, the light from a dozen fluorescent tubes glinted off a rack of softball trophies. Rows of boxes packed with breakfast cereals awaited the morning patrons. The stools at the counter were covered with bright red vinyl, patched with black electrician's tape. There was a jukebox in one corner and video games in another. Somebody was sleeping in a back booth. You don't get this kind of atmosphere at McDonald's. We found a table near the window so we could watch the trucks go by.

Our waitress came to the table with menus and silverware. Pinned to her T-shirt, just above the words I'VE BEEN TO SANTA LAND IN DIESEL FUEL, NEW MEXICO, was her nameplate. "Thank you, Dolly," I said, reading her name. "Could we have two cups of coffee?"

"The name's Edna," she said, and popped her gum.

I looked again at her nameplate. It definitely said Dolly. I decided not to make an issue of it. Edna or Dolly went to get our coffee.

"The Special looks good," CoCo said.

I looked at the slip of paper clipped to the inside front cover of the menu. TODAY'S SPECIAL: REUBEN ON A BULKIE. CHOICE OF VEGETABLE.

"Looks good here, too," I said. CoCo smiled. That's why I married her. We agree on everything.

Edna or whomever returned with the coffee. "Ya wanna order now?" she inquired.

"I'll have the Special, please," CoCo told her. "The Tender Baby Beef Liver with Home Fries."

I almost choked on my coffee. Tender Baby Beef Liver! But that must mean—a glance at CoCo's menu confirmed my suspicion. The Special that was listed in my menu was an entirely different meal in hers! This was odd indeed, but the waitress was staring at me and I didn't want her to think I was crazy. "Uh, I'll have the Special too, please."

Edna grunted and moved toward the kitchen.

"I wonder why her name is Edna if her nameplate says Dolly," CoCo said.

"Maybe Edna is her nickname," I replied. I didn't believe that, but I didn't want to frighten CoCo. My father had always told me, "Vern, women have to be protected." He never said what they had to be protected from, but maybe this was what he meant.

Someone slipped a coin into one of the video games. "You dare to challenge me, human?" the machine asked. The sounds of galactic carnage filled the restaurant.



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"I think I'll play a game until the food comes," I said. Video games always relax me, and after a whole day at the roller derby I needed relaxing. Happily they had my favorite game, Missile Command. I deposited my quarter and prepared to defend my cities against enemy attack.

The game didn't take long. I couldn't seem to find the range with my missiles. I was nuked out of existence by the first big wave of alien firepower. My score was just under 14,000.

My usual score was always over 70,000.

Puzzled, I watched the guy next to me play Pac-Man. He was as unsuccessful as I had been. He walked away from the machine, shaking his head.

On the way back to the table, lost in thought, I stopped at the jukebox and studied the selections. I dropped a quarter down the slot and punched the buttons for two songs, one each by Roy Orbison and Bruce Springsteen.

The jukebox returned my quarter. No music played.

Edna had delivered our Tender Baby Beef Liver. While we ate, CoCo talked about the tournament. It had been a real treat for her, seeing her old teammates on the Bellingham Bobcats. She had persuaded them to autograph my program book. I usually liked to hear her talk about her roller derby days. That was when I first met her, watching from ringside while she punched out the opposition. One evening she had been knocked from the track and into my lap. I guess our romance began when she pulled herself out of my bucket of popcorn and said, "Oh, excuse me!"

But now I took no pleasure in her recollections. I was confused, unable to think toward a conclusion. What did it all mean? The waitress with two names. The menus with two Specials. My poor score on Missile Command. The reluctant jukebox. And there, beside my plate—*a bowl of cole slaw.*

I hadn't ordered it.

When we finished eating CoCo said, "Sweetheart, why don't we take a room at the motel? It's late, and I'm *so* tired." And she looked at me in that seductive manner she uses when she wants to rip my clothes off and wrestle me to the floor.

I had wanted only to get into the Camaro and go home, but when I thought about CoCo ripping my clothes off, well, what could I do? I agreed, and went to pay the bill. It's only my imagination, I decided. Why worry about a bad game of Missile Command? Who cares about Tender Baby Beef Liver?

Edna dropped her cigarette on the floor and rang up our bill.



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I gave her a ten. She counted out my change and popped her gum. "Hey, hurry back," she said.

I turned and started back to the table. And stopped.

One of the dollar bills she had given me was not American.

*It was Canadian.*

I threw it onto our table. Let Edna keep it. CoCo is going to rip my clothes off. I won't think of anything else!

The Camaro was still parked where we had left it. That was reassuring.

The man behind the motel registration desk was not. He was reading the sports pages of the local newspaper. One of the headlines read HOMERUNS HAMMER HOME TEAM—MARINERS DROP DOUBLEHEADER. Those games had been played a week ago. The man was not reading today's paper!

"We'd like a room for the night, please," CoCo said, when she realized I wasn't going to speak. I pretended to be busy with the candy machine.

"Double bed?" the man asked. My hand tightened on the Three Musketeers' selector knob. How did he know?

"A double bed would be fine," CoCo said.

"That'll be thirty-seven ninety with tax."

"Sweetheart, I need some money."

I turned slowly, trying to be calm, trying not to crush the candy bar in my grip. I removed my wallet and counted out four tens. "I'm short of ones," the man apologized, filling my hands with dimes and quarters. I shoveled them into my pockets without counting them.

"Room three eleven," he said. "Have a good night." He returned to his paper. I wondered if I should bring him up to date on the Mariners, but feared his reaction to our six-game losing streak.

Entrance to each room was directly from the parking lot. We went back to the Camaro and parked it in the space reserved for Room 311.

"Isn't this a strange place, Vern?" CoCo asked.

"Strange?" I pretended ignorance. How much did she know?

"Yes, strange. That waitress. That cole slaw. Did you order that?"

"I guess so. I really don't remember. It was only cole slaw."

"By the way, how did you do on Missile Command?"

"Oh, you know," I said. I yawned, feigning indifference, and tried the key in the lock. It worked. I was glad.

"Oh, sure," CoCo said, looking at me. She can always tell when I'm being untruthful.



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"Enter, my Queen," I said as I swung the door open. I bowed. She likes that kind of stuff. I hoped it would take her mind off whatever she was thinking.

Inside we flipped to see who would use the bathroom first. I won. CoCo went to the television. "Don't be long," she said, and gave me that special look again. I promised I wouldn't be.

There were no towels in the bathroom.

I kept cool. Nothing to get excited about. Perhaps the towels are here, but misplaced. I opened the cabinet beneath the sink. That is, I tried to. The cabinet wouldn't open. The doors were a false front.

I could hear the television. CoCo was laughing. I wondered if it was time for Johnny Carson. I didn't want to miss the monologue. I hurried through my business, then reached behind me.

There was no toilet paper roll in the dispenser.

Even this did not panic me. Tonight I was discovering unsuspected inner strengths. I improvised with the facial tissues that, fortunately, were within reach.

"Vern!"

CoCo's voice came clearly through the door. It didn't sound like she was anxious to use the facilities. It sounded like trouble. I went to see what was wrong.

CoCo sat on the edge of the bed, adjusting the picture. On the screen a moose and squirrel cavorted through a cartoon I remembered from childhood.

"What's the matter, CoCo?"

"Watch!" she commanded.

The moose was dressed as a magician. "Hey, Rocky," he bragged, "watch me pull a rabbit out of my hat!"

The squirrel was skeptical. "But that trick never works!"

Suddenly CoCo changed the channel.

"This time for sure!" The moose reached into the hat.

CoCo flipped the selector back to the first channel. The moose had hold of a ferocious lion by its mane.

"Wrong hat," the squirrel observed.

"I take a seven-and-a-half."

CoCo turned again to the second channel. The squirrel was still there.

"And now here's something we hope you'll really like!"

Two different channels—both broadcasting the same program!

CoCo ran past me. The bathroom door slammed shut.

The narrator's voice boomed from the speaker. "That evening our heroes moved to the back of the store!"



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"Well, Bullwinkle, here we are in the back of the store."

"Sweetheart," I said through the flimsy plywood, "are you all right?"

"Boris, dollink, how do ve get secret formula from moose and squirrel if dey von't come out?"

CoCo wouldn't answer. I sat on the bed. I remembered this episode. Bullwinkle had eaten the mad scientist's notes explaining the formula for the silent explosive, Hush-a-Boom. Fortunately the knowledge was not lost because Bullwinkle remembered everything he had ever eaten. Every time he burped he revealed another part of the formula.

"Vern!"

"Yes, dollink! I mean, yes darling!"

"There's no toilet paper in here!"

"Beh-heh-heh. Ve've got dem now, Natasha."

I went to the bathroom door. "Use the Kleenex!"

The toilet flushed. The door flew open and CoCo was in my arms.

"Hokey smokes!"

"Oh, Vern," CoCo said, "please let's get out of here. Let's go home. Please!"

She was almost hysterical. In a moment I would have to slap her, and if I slapped her she would break my face. I grabbed our coats and my Three Musketeers bar. "Come on!" I shouted.

"Look, Bullwinkle, a message in a bottle."

"Fan mail from some flounder?"

But we didn't wait to find out. We were already in the Camaro and barreling up the ramp to Interstate 5.

Soon the red neon of **EAT MOTEL** had disappeared from the rear view mirror. CoCo and I looked at each other, embarrassed. Then we laughed. Imagine, two adults, panicked by a dumb cartoon show!

"Split that chocolate with you," I said.

"Fine by me." CoCo peeled the paper from my Three Musketeers bar and broke off a piece. I opened my mouth and she popped it in. She took a bite herself.

My hands tightened on the wheel. CoCo gasped.

It was not a Three Musketeers bar.

It was a Snickers. ●



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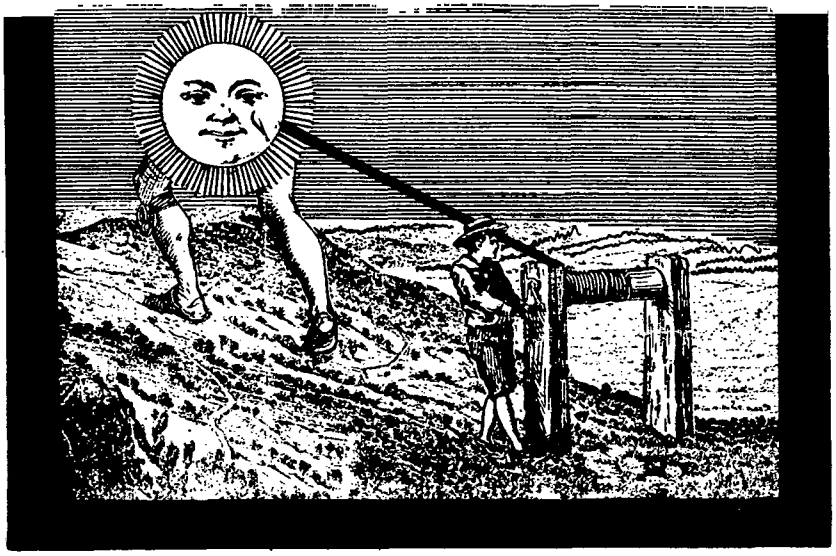

# CASTING GLANCES

art: Michael Kasper

In the late afternoon stillness
I cast my line of sight
to the horizon like a fisherman
casting rod & reel.

With an unexpected and sudden jerk
I hook onto the setting sun.
And it's a big one!

Inch by inch I reel in
the golden orb of sunlight.
It puts up a fatiguing fight
running along the horizon

and then broad-jumping high
in the deep blue sky,
flipping and flopping with flashes
of blinding brilliance.

Just as I pull it within reach
my 93-million-mile line
breaks under the heat and tension.

The sun swims free over the horizon
and darkness covers the land.

**by Peter Payack**

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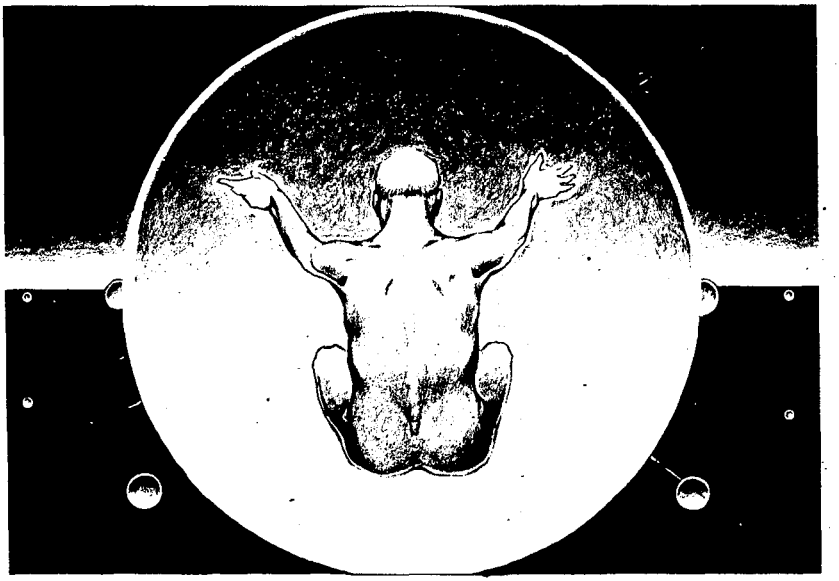
# THE GRAY MAELSTROM



by Daniel Keys Moran

This is the author's second appearance in these pages. His first, "All the Time in the World," which appeared in our May 1982 issue, garnered a great deal of attention and at least one Nebula nomination.

art: John Pierard

My name is Joel Gray. Or was. The Joel part, of course, is appropriately meaningless. That my surname is Gray I find meaninglessly appropriate, for it is so very, very gray.

There are two shapes here. A mathematician from the place where I was born would tell you that the only meaningful numbers are zero, one, and infinity; but then, I have spent infinity, spent

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it twice over in this limbo of the gray, and I assure you that the number two is the *only* meaningful number.

The first shape is the line; long, twisting, and sinuous, lines weave themselves about my disembodied viewpoint in a multitude that halves forever; they pulse, and resonate, one to another, on those rare occasions when two lines come into close enough proximity to affect each other. They writhe like snakes embracing, exchange information the nature of which I am only now beginning to grasp, and then flash apart to resume their solitary lineness.

The other shape is the sphere. They are perfect spheres, without grain or roughness, and all of a size, unlike the lines. With no reference points to judge against, the spheres may be either very large or very small; impossible to say. When I first came here, I used them to measure the lines against.

They are colored in shades of gray, infinite, subtle variations of grayness, from dark grays that almost remind me of the color, or lack of it, that I remember as "black", to pale, chalky grays that almost seem to be the color—or lack of it—that I recall as "white."

They move. The lines squirm through and about the spheres, and there is never the third element of empty space; all that I see is composed of the dancing spheres, the writhing lines, and the shifting colors of gray.

(The dance was, I thought when I first came to this place, without meaning, but now I see it otherwise; rather than simple Brownian motion, it harmonizes; the dance is of form and rhythm, with a complexity such that without infinity to contemplate it I should never have discovered it.)

Sometimes, when with all the effort that my disembodied self is capable of expending, I am yet unable to concentrate on the gray maelstrom, I remember the time before I came here. I was a geologist, a professor of geology in a place called *Arizona*. As this timelessness has stretched on, I have found myself more and more unable to recall events from that other place; it seems to have been a curious and strange world, a place of color and sensation, and strangest of all, a place of others who were like myself; they did not bear the name Joel Gray, but they were like me nonetheless.

I do remember the ending, of course. Perhaps I shall not ever forget that. I was out in the field, collecting samples, and had set up camp as night wore on. I intended to . . . sleep? . . . yes, sleep, and I had built a fire, for warmth.



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It had come out of the sky, with fear strong in the thoughts of those who were contained inside. They were not like me; they were not named Joel Gray, but even more than those who were like me but who did not have my name, these were different.

They thought of their craft as an inverspace ship, and it was crippled by an impact with an antimatter micrometeor. They needed to land their ship and make repairs, but they could not do that without turning off the inverspace drive field. It was their great bad fortune that the micrometeor had destroyed the controls that would allow them to shatter the integrity of the inverspace drive field. They had a way out, though; an inverspace drive field, when taken deep enough into the gravity well of a sufficiently massive planet, would of its own accord attenuate and flicker out.

They knew a very good reason why they should not do this—it had something to do with their religion, or beliefs—but they were weak, and they wanted to live. They took the ship down, to the planet whose name was, I think, Earth.

*Thou shalt not activate an inverspace drive field within the atmosphere of a potentially inhabited planet.*

I learned all of these things as the inverspace drive field of the landing ship washed over me, and then, in the instant before I learned from the mind of the drive engineer *why* an inverspace drive field must not be used in the atmosphere of a potentially habitable planet, I was here.

That was two eternities ago.

Damn this grayness.

The storm of line and sphere plays itself about me. I am certain, now, that there is a definite pattern to it all. And, sometimes . . . when I concentrate very hard . . . it seems that I can make the dance shift, and do what I will it to do.

Of this much I am certain; I am growing. With each pulse of graying eternity, the complexities and intricacies of the dance of line and sphere become plainer, more apparent, easier to encompass.

With this growth there comes a feeling of power; definite, exultant power.

Perhaps some timeless time I shall have grown to such extent that I shall be able to shed this grayness like a snake shedding its skin, and return to the place where I was a man named Joel Gray.



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I know, with an inner certainty that passes description, that the power shall not desert me, if ever I leave the gray maelstrom.

And if this should ever come to pass, I think I shall ask the drive engineer of the people who are not like me just *why* an inverspace field must never be used within the atmosphere of a possibly inhabited planet.

I am more certain than ever that the dance bends to my will.

There is a story that I remember. It concerns a creature called a jinn.

This jinn was imprisoned within a bottle. He was a creature of great power.

After a thousand years in the bottle, he had decided to grant three great wishes to whoever unstopped the bottle and let him out.

After two thousand years, he had decided to serve forever whoever unstopped the bottle and let him out.

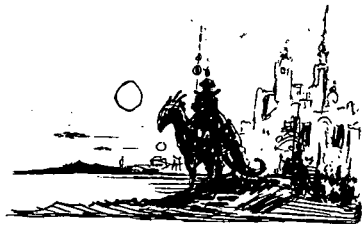
After three thousand years in the bottle, he had decided to spend the rest of all time torturing the luckless bastard who let him out of the bottle.

It amazes me, how easily the maelstrom bends to my will.

The alien starship sat squat and holed on the cold sands of the Arizona desert. Some forty yards from where the ship landed, a geologist was sleeping next to his fire.

Sometime within the next few seconds, the shrinking, dying inverspace field would withdraw from the form of the sleeping man.

The very last sight that any of the aliens had was of a tall, gray demon, walking patiently towards their ship, a bare few feet beyond the edge of the shrinking inverspace field. ●





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# POWER TIMES ONE

## by J. Michael Matuszewicz

art: Ron Logan

The author is a lathe operator,
which he claims is
a fine job for a would-be writer:
"The body can develop
rhythmic work patterns
while the mind goes far, far away."
(Funny, we've heard
the same said about washing dishes and SF.)

I wish I could say that I felt some apprehension as I went to answer the door; but honestly, I was simply upset about having to get out of the bathtub. A fast glance around the living room told me it was still okay; this was Sunday morning, and I usually give the apartment a good cleaning before going out Friday night in case I find someone interesting to bring home.

My first impression of the man standing on my doorstep was of his eyes. You could not trust a man with eyes like that: they showed



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he felt too little to care about anyone but himself.

I stepped back, and he came in without invitation. Clutching my beltless bathrobe around me, I closed the door and motioned him to a chair.

Although he carried no briefcase, he had samples with him; his suitcoat pockets bulged with angular things. Another look at him told me no one would buy from a man like this; he was fairly well dressed, in that his clothes were new, but he wore his jacket unbuttoned and his silk shirt had no tie. His dark hair was recently styled, but carelessly combed; his nails manicured but dirty. He evidently had the money to comfort himself, but clearly did not care what impression he made.

He looked at me with those heavy, amoral eyes, and I shrunk a little. Obviously this was no salesman.

I got myself a glass of water from the kitchenette and sat down to face my company/intruder/guest. Neither of us spoke for some time, but there was no noticeable silence—we were both waiting for something.

"You selling something?" I finally asked, knowing he was not.

He laughed in short shocks and drew something from one pocket. It was a Möbius strip machined from a block of solid brass and suspended in a cube of clear plastic. At the center of the ring was a small point of light, a micro-star. The "star" was a chip of tourmaline coated with phosphorus; the chip radiates electrons when warmed, the coating glows when struck by electrons.

I know; I made it. But I had made only one—

And I could see it still sitting on my bookcase as I held it in my hand. It even had the little scratch on the bottom I had not polished out.

He smiled at me as I turned the cube over in my hand. I lifted mine from the case and held them side by side. They were identical; every glow, every shimmer, every imperfection.

"It took me eighteen days to make this," I told him, holding up mine. "What novelty store did you pick this up in?" I asked him, holding up his.

His face smiled warmly, but his eyes were still cold. Without speaking he pulled another cube from his pocket. I took it from him and held all three up to the light. The same brass strip, the same micro-star, the same scratch.

When you make something with your own hands; when you handle mathematics, machine tools, and precious gems to create a new type of optical art; when you create uniqueness; well, you feel cheated



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when someone hands you cheap copies.

But these were more than copies; they were too real, too exact.

"You have a hobby," he said flatly. I sat down to listen. "I used to have the same hobby. Old Magic, Old Superstitions; they gave me these." I turned them over in my lap, thinking I should be upset with myself for mixing them, but listened to his explanation. "I found a Golden Genii," he told me in too cold a voice.

I looked up at him but he was not laughing, and I could not suspect him of being deceived. And he had been right; my hobby was Old Magic, or, more specifically, why tales of magic are the same all over the world. The Golden Genii itself was mentioned in legends on four continents.

"I found him," my guest/intruder/storyteller continued. "And he had the old formulas. The ancients told their stories true; a Golden Genii grants three wishes—and he is tricky and mischievous."

Old Magic—the histories of witches and wizards; every civilization had its accounts of crystal balls, little people, and transmutations. I had always known them to have a thread of truth. It had been an interest which had become my avocation. Too many people had found it to be my obsession.

"Three wishes," I said weakly.

"I asked for time to think." The smile showed in his eyes now. He was as keenly interested as he hoped I was. I was.

"The genii granted that as my first wish and told me he would come back in three days. I decided then I had to plan this exactly right, and I think I did."

"First, immortality," I told him.

"Right," he grinned. "But not simply not dying. I would not want to age eternally without even the recourse to suicide."

I felt challenged. Effective eternal youth with contingency options.

"I decided," he went on before I could come up with an answer, "I wanted an inner-second-self. An alternate personality with conscious and active control over all bodily functions up to and including regeneration of organs, chemical balancing acts, and an inherent anti-aging. All within and under the guidance and responsibility of my consciousness, of course."

"Right," I agreed with him. "But also," I added, "the ability to generate new organs and create new chemical cycles to mimic the evolution of mankind so you can remain in the mainstream of society without ever looking out of style, body-wise."

My guest looked slightly pained.

"No," he admitted. "I never thought of that."



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"Last wish," I half-asked, half-demanded.

"Machines."

"A transmuter?"

"Something better. Six different machines all utilizing the same principle of total conversion of matter/energy potentials." He reached into his suitcoat pocket and after a brief tussle withdrew a calculator-shaped box, about eight inches long and four wide. The face was partly mirrored; the other half contained three large switches. After looking around for a minute he picked up a lighter from my end table and placed it on the box's mirror.

"Read," he said as he pushed the first switch. "It analyzes the energy patterns of the matter." The lighter stood balancing on the box.

"Absorb," he said as he pushed the second switch. The lighter disappeared instantly. No flash, no fade, just gone. "It stores the energy in the matter as a battery stores electricity." His explanations almost made sense, almost.

"Produce," he said as he pushed the third switch. The lighter was back. He tossed it to me. I could find no signs it had been tampered with, or changed.

"Produce," he said as he pushed the third switch, again. My lighter returned just as it had disappeared, standing on the mirrored surface of the machine; except that it was still in my lap, too.

I spent an hour examining both lighters. They were both mine. They were filled to the same level, they were dented where I had pried the cap to refill the disposable cylinder, they were the same but not one.

Then my friend/visitor/stranger made three more, each at the push of a switch.

"A duplicating machine. Every office should have one." I guess I was a little punchy by then.

"And five more machines," the man reminded me.

"But why?" I asked him. "If you had only two you could use one to duplicate the other. You can have an unlimited number of them."

"No," he explained quietly. As he talked, he stepped around the breakfast bar and started rummaging around in my refrigerator. "I have that machine in several sizes; even one that is modular—I add as many sections as I want to make any size platform." He continued speaking while stuffing apple pie into his mouth. "The five other machines are on the same principle, but use the power in different ways."

"An access to parallel universes," I whispered. "If current theory



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is right, then you only need to balance inertial energy levels to pass from one universe to the next."

"Right again." He slunk conspiratorily next to me. "Except that not all universes are parallel, or intersecting. Some are crazy skews, and some are the same universe—just a little late."

"You're from this world, this—my—Earth, but your universe is ahead. But not too far." It came tumbling in on me. "And you want to test your machines, maybe experiment with a few cultures back here before you muck around with your own home."

He smiled, full face, eyes included. He laid the duplicator on the arm of my chair, hefted my last peach, and went to the door.

"I knew you were a bright boy. You have exactly two years to make the best of that little gadget. If you are overly moral, and stupid, you will smash it to little bits. If you are greedy and stupid, you will flood the market with gold. Use it carefully and it will be a great benefit."

As he finished my/his fruit, he stepped out into the hall.

"We both profit from your success; only I will profit from your failure. Use it with care."

"I will," I told the closing door. "I will."

"I'm disappointed in you," my guest/accomplice/intruder told me as he leaned over the balcony railing and studied the city lights.

I closed the sliding terrace doors to shut the sounds of the party into the penthouse.

"There are problems," I told him straight. "And I wanted to move slowly, to avoid suspicion."

"But," he smiled without expression in his eyes, "you are only a millionaire. I expected much, much more."

"There is a limiting factor, as you will agree." Somehow his attitude disturbed me, and I had no more reason to trust him now than I had when he first visited me two years before. "The more power I attain," I told him, "the less time I can spend duplicating things, and the duplicator is my only real source of power. My enterprises all rest on its performance: precious metals, ceramics, semiconductors. And the machine can only do so much, and the need keeps expanding." I leaned against the rail and avoided his eyes. "Are the others doing any better?"

"Some, yes," he admitted. "The you in the timeline I just left has done much better. But," he added slowly, "in two places I could find absolutely no trace of you; it was as if you followed me out of that world."



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"What do you do with me now?"

He laughed in soft shocks. "Nothing. Leave you here to carry on. If I need something special I may call on you for it, but it won't be much. If you would start some research projects you could be of real value. I'd like to get a good technology mixture."

As he swirled his drink his eyes saddened. "It works both ways, you know. I have given you a little machine to make you rich and powerful, but you dare not let anyone else know about it; you are the custodian of a great and valuable tool which can lift your world out of its misery, but it is worth your life if anyone knew about it.

"I, on the other hand," he continued sourly, "I have become a guardian of many worlds. I must allow only so much disruption on any one Earth, but need the disruption to further my aims—to amass power I can take home. Gold and silver are not power and wealth if there is too much of them. I need only one perfect world to live on, but I am beginning to feel responsible for all the other worlds I am using in order to fashion that one ultimate home."

His thoughts seemed jumbled, as if I had walked in on the middle of a conversation, but still he made sense—he was just as trapped as I was.

"The Golden Genii," I said after many moments of silence. "I wonder what his world is like?"

My visitor smiled faintly. "If their technology is our magic, their magic must be beyond our comprehension."

"I have examined the machine you gave me. I wish I had the nerve to take it apart—see how it works."

"Don't bother," he told me gravely. "There are a few slabs of crystal and some shimmering lights, that's all."

There was a long silence between us, and the sounds of my neglected party beckoned me, but I still had to know one thing.

"Why do you trust me?" I asked him. "And the me in other universes? And is it only me?"

"That is very simple. I can trust you because I can step away from this world and never return; you cannot follow me. And it is usually you, after all; I want to deal with as few people as possible, and you are basically the same all over." He said that with a smiling face and deceitful eyes.

After he left, the party seemed a little livelier than it had been. The withdrawn fear of his presence lifted to leave me happy and confident. I still did not know very much about the man and still did not trust him, but I knew what he was after, and I felt I could live with it. I was really enjoying the party until I answered the



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door and was handed a package by a bonded courier.

The package held a book, a book a friend of mine had found a year ago, but I had been moving around so much lately he had not been able to find me until now. The book had been hidden in the bottom of a burgher's strongbox rotting away in a little French museum. I have read the book. I now sit cursing myself with every profanity and vulgarity in my vocabulary.

The book is a living nightmare to me now. *The Viscount's Book of Ancients and Their Magic* is written in a close hand and is richly illustrated. The frontispiece shows an old man: a magician working his crystal ball, calling to his demons in strange lands, the demons appearing in his ball at his command.

The CRT the elderly alien is looking into displays in binary coding the proper frequencies and directions for radio transmissions if he wishes to activate a deep-space communications relay. It also tells him the proper junction times for calling his home base.

It tells me, now, that I could have activated the relay either five months ago or eighty years from now. It tells me that I could have contacted these peoples and received their gifts.

I missed it. I could have sat home and received the book when it was found. I could have used the information and become immortal and had my own machines of power.

And I would probably spend all my time exploring other universes, finding other 'me's and keeping them from finding the book in time to use it.

No wonder I never trusted the man who came to my door—I wouldn't trust me either. ●

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# PERFECTION

by Henry Leon Lazarus

art: Jack Gaughan

The author is a dentist, practicing in the Philadelphia, PA area. He is 34, married, with three children. This is his first solo SF story.

As Gregor opened the door, he was overwhelmed: two paws struck him on the chest. A big, wet tongue licked his face. Somewhere in the background, a tail was wagging furiously. Somehow, Gregor managed to remain standing.

"Down, Sasha, *down*," said Dr. Olisof, Gregor's guide. The dog sat, and Gregor could see her clearly, looking back at him eagerly—gray-brown, almost a wolf but . . . precisely and exactly, the essence of *dog*.

"Yes, she—she *is* a perfect dog," Gregor said. He put out his hand; the dog's head fitted perfectly as he petted her.

"Sasha here was our first attempt at perfection," Dr. Olisof said proudly. "We chased down every genetic defect, every one of nature's mistakes. The biochemistry—we did it. We built the perfect dog."

"Yes," sighed Gregor, scratching Sasha's ears. "She *is* perfect."

"Of course." Dr. Olisof blinked. "There would be no point in imperfection."

"You have more to show?" asked Gregor, then reluctantly left Sasha and followed his guide. They went to see the perfect cat—who stared back unblinkingly. They visited the perfect parrot, who listened as Gregor recited, "The rain in Spain falls mainly in the plain," then repeated it back with an upper-class English accent. They admired the perfect cow.



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"It's all very impressive," said Gregor at last. "In all this perfection . . . has the Institute ever made a mistake . . . produced something that didn't . . . make it?"

Dr. Olisof stiffened. "Come this way," he muttered. He led Gregor through a locked door, then another. "Here," the biologist announced.

A big, blond Tarzan was swinging on a trapeze. He caught sight of the visitors, spun easily into an aerial somersault, and landed beside Gregor. He smiled—a perfect smile, of course—kissed Gregor on the nose, said "Gleep" very clearly, then cartwheeled his superb self back to the trapeze.

"What . . . what *happened* to him?" Gregor asked, as they watched the young man swing into the air again.

"Nothing happened to him," said Dr. Olisof, then sighed. "Unfortunately, intelligence turned out to be a genetic defect." ●

# IAsfm Puzzle #7

From page 25

## Solution to "White Holes"

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# FAREWELL AND THEN FOREVER

I will travel the black seas of emptiness and years,
Void of tides, awash with light,
To certain far mysteries and dreams;
For you, be an Odysseus,
Lotus-floating, light-years from home,
Returning with my charts, maps, records,
Tales spun in a forgotten tongue.

I will disembark to sit and snare
Those who seek to flee this rambling,
Star-gathering, Circe see-er; those who protest
In a language yet-to-be, saying,

"Be off, old man. We have heard these tiresome tales before.
We have been there. We have seen."

Yet I was—will be—the first.

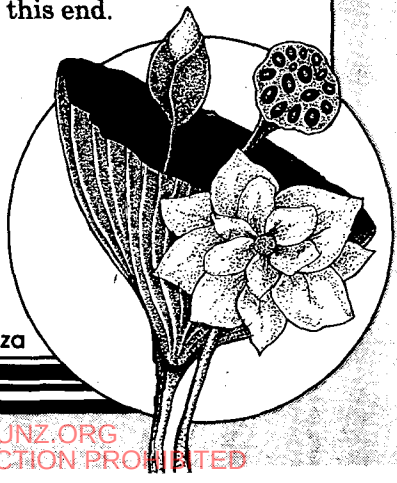
I will go. Not because I will be forgotten
Or remembered
Or revered.
Not because, in that strange future, I will be
The archaic buffoon of our planners' mathematics.
I will go because I share a hope in waiting stars,
New worlds, beginnings wrought from this end.

My Penelope, take care.
Farewell, now forever.

I go to carry our dreams, love,
Through eons and worlds,
Across the span of space and time
To Telemachus's children's children.

**—Anne Devereaux Jordan**

art: Theresa Fiorenza



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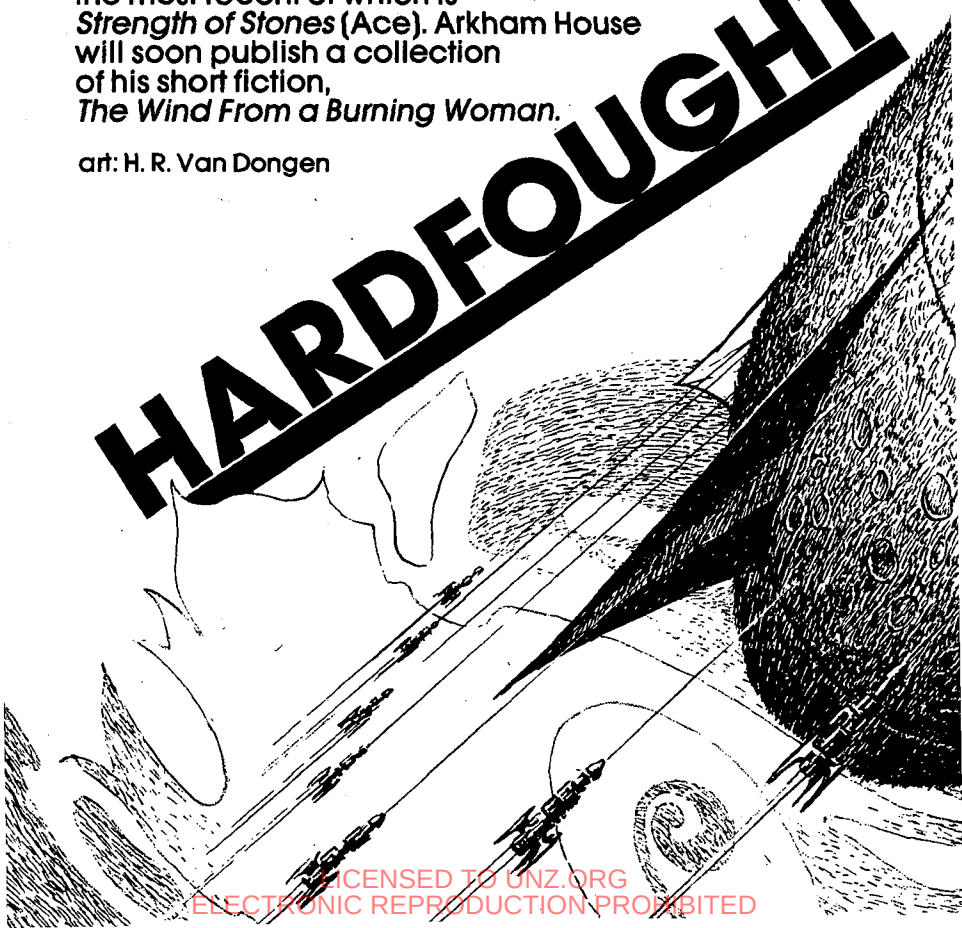
# by Greg Bear

Before we tell you about the author, let us first warn you that the story you're about to read is like nothing else you've ever seen in these pages. It's a difficult story—not one you can skim before going to bed at night. But it is also, we think, a very rewarding story. Give it your time and attention, and we don't think you'll regret it.

Greg Bear is an author/illustrator living in San Diego, California. He has published four novels, the most recent of which is *Strength of Stones* (Ace). Arkham House will soon publish a collection of his short fiction, *The Wind From a Burning Woman.*

art: H. R. Van Dongen

# HARDFOUGHT



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Humans called it the Medusa. Its long twisted ribbons of gas strayed across fifty parsecs, glowing blue, yellow, and carmine. Its central core was a ghoulish green flecked with watery black. Half a dozen protostars circled the core, and as many more dim conglomerates pooled in dimples in the nebula's magnetic field. The Medusa was a huge womb of stars—and disputed territory.

Whenever Prufrax looked at it in displays or through the ship's ports, it seemed malevolent, like a zealous mother displaying an ominous face to protect her children. Prufrax had never had a mother, but she had seen them in some of the fibs.

At five, Prufrax was old enough to know the *Mellangee*'s mission and her role in it. She had already been through four ship-years of indoctrination. Until her first battle she would be educated in both the Know and the Tell. She would be exercised and trained in the Mocks; in sleep she would dream of penetrating the huge red-and-white Senexi seedships and finding the brood mind. "Zap, Zap," she went with her lips, silent so the tellman wouldn't think her thoughts were straying.

The tellman peered at her from his position in the center of the spherical classroom. Her mates stared straight at the center, all focusing somewhere around the tellman's spiderlike teaching desk, waiting for the trouble, some fidgeting. "How many branch individuals in the Senexi brood mind?" he asked. He looked around the classroom. Peered face by face. Focused on her again. "Pru?"

"Five," she said. Her arms ached. She had been pumped full of moans the wake before. She was already three meters tall, in elf-state, with her long, thin limbs not nearly adequately fleshed out and her fingers still crisscrossed with the surgery done to adapt them to the gloves.

"What will you find in the brood mind?" the tellman pursued, his impassive face stretched across a hammerhead as wide as his shoulders. Some of the fems thought tellmen were attractive. Not many—and Pru was not one of them.

"Yoke," she said.

"What is in the brood-mind yoke?"

"Fibs."

"More specifically? And it really isn't all fib, you know."

"Info. Senexi data."

"What will you do?"

"Zap," she said, smiling.

"Why, Pru?"



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"Yoke has team gens-memory. Zap yoke, spill the life of the team's five branch inds."

"Zap the brood, Pru?"

"No," she said solemnly. That was a new instruction, only in effect since her class's inception. "Hold the brood for the supreme overs." The tellmen did not say what would be done with the Senexi broods. That was not her concern.

"Fine," said the tellman. "You tell well, for someone who's always half-journeying."

She was already five, soon six. Old. Some saw Senexi by the time they were four.

"Zap, Zap," she went with her lips.

Aryz skidded through the thin layer of liquid ammonia on his broadest pod, considering his new assignment. He knew the Medusa by another name, one that conveyed all the time and effort the Senexi had invested in it. The protostar nebula held few mysteries for him. He and his four branch-mates, who along with the all-important brood mind made up one of the six teams aboard the seedship, had patrolled the nebula for ninety-three orbits, each orbit—including the timeless periods outside status geometry—taking some one hundred and thirty human years. They had woven in and out of the tendrils of gas, charting the infalling masses and exploring the rocky accretion disks of stars entering the main sequence. With each measure and update, the brood minds refined their view of the nebula as it would be a hundred generations hence when the Senexi plan would finally mature.

The Senexi were nearly as old as the galaxy. They had achieved spaceflight during the time of the starglobe when the galaxy had been a sphere. They had not been a quick or brilliant race. Each great achievement had taken thousands of generations, and not just because of their intellectual handicaps. In those times elements heavier than helium had been rare, found only around stars that had greedily absorbed huge amounts of primeval hydrogen, burned fierce and blue, and exploded early, permeating the ill-defined galactic arms with carbon and nitrogen, lithium and oxygen. Elements heavier than iron had been almost nonexistent. The biologies of cold gas-giant worlds had developed with a much smaller palette of chemical combinations in producing the offspring of the primary Population II stars.

Aryz, even with the limited perspective of a branch ind, was aware that, on the whole, the humans opposing the seedship were more adaptable, more vital. But they were not more experienced.



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The Senexi with their billions of years had often matched them. And Aryz's perspective was expanding with each day of his new assignment.

In the early generations of the struggle, Senexi mental stasis and cultural inflexibility had made them avoid contact with the Population I species. They had never begun a program of extermination of the younger, newly life-forming worlds; the task would have been monumental and probably useless. So when spacefaring cultures developed, the Senexi had retreated, falling back into the redoubts of old stars even before engaging with the new kinds. They had retreated for three generations, about thirty thousand human years, raising their broods on cold nestworlds around red dwarfs, conserving, holding back for the inevitable conflicts.

As the Senexi had anticipated, the younger Population I races had found need of even the aging groves of the galaxy's first stars. They had moved in savagely, voraciously, with all the strength and mutability of organisms evolved from a richer soup of elements. Biology had, in some ways, evolved in its own right and superseded the Senexi.

Aryz raised the upper globe of his body, with its five silicate eyes arranged in a cross along the forward surface. He had memory of those times, and times long before, though his team hadn't existed then. The brood mind carried memories selected from the total store of nearly twelve billion years' experience, an awesome amount of knowledge, even to a Senexi. He pushed himself forward with his rear pods.

Through the brood mind Aryz could share the memories of a hundred thousand past generations, yet the brood mind itself was younger than its branch individuals. For a time in their youth, in their liquid-dwelling larval form, the branch inds carried their own sacs of data, each a fragment of the total necessary for complete memory. The branch inds swam through ammonia seas and wafted through thick warm gaseous zones, protoplasmic blobs three to four meters in diameter, developing their personalities under the weight of the past—and not even a complete past. No wonder they were inflexible, Aryz thought. Most branch inds were aware enough to see that—especially when they were allowed to compare histories with the Population I species, as he was doing—but there was nothing to be done. They were content the way they were. To change would be unspeakably repugnant. Extinction was preferable . . . almost.

But now they were pressed hard. The brood mind had begun



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a number of experiments. Aryz's team had been selected from the seedship's contingent to oversee the experiments, and Aryz had been chosen as the chief investigator. Two orbits past, they had captured six human embryos in a breeding device, as well as a highly coveted memory storage center. Most Senexi engagements had been with humans for the past three or four generations. Just as the Senexi dominated Population II species, humans were ascendant among their kind.

Experiments with the human embryos had already been conducted. Some had been allowed to develop normally; others had been tampered with, for reasons Aryz was not aware of. The tamperings had not been very successful.

The newer experiments, Aryz suspected, were going to take a different direction, and the seedship's actions now focused on him; he believed he would be given complete authority over the human shapes. Most branch inds would have dissipated under such a burden, but not Aryz. He found the human shapes rather interesting, in their own horrible way. They might, after all, be the key to Senexi survival.

The moans were toughening her elfstate. She lay in pain for a wake, not daring to close her eyes; her mind was changing and she feared sleep would be the end of her. Her nightmares were not easily separated from life; some, in fact, were sharper.

Too often in sleep she found herself in a Senexi trap, struggling uselessly, being pulled in deeper, her hatred wasted against such power. . . .

When she came out of the rigor, Prufrax was given leave by the subordinate tellman. She took to the *Mellangee*'s greenroads, walking stiffly in the shallow gravity. Her hands itched. Her mind seemed almost empty after the turmoil of the past few wakes. She had never felt so calm and clear. She hated the Senexi double now; once for their innate evil, twice for what they had made her overs put her through to be able to fight them. She was growing more mature wake by wake. Fight-budding, the tellman called it, hate coming out like blooms, synthesizing the sunlight of his teaching into pure fight.

The greenroads rose temporarily beyond the labyrinth shields and armor of the ship. Simple transparent plastic-and-steel geodesic surfaces formed a lacework over the gardens, admitting radiation necessary to the vegetation growing along the paths.

Prufrax looked down on the greens to each side of the paths without much comprehension. They were *beautiful*. Yes, one



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should say that, think that, but what did it mean? Pleasing? She wasn't sure what being pleased meant, outside of thinking Zap. She sniffed a flower that, the signs explained, bloomed only in the light of young stars not yet fusing. They were near such a star now, and the greenroads were shiny black and electric green with the blossoms. Lamps had been set out for other plants unsuited to such darkened conditions. Some technic allowed suns to appear in selected plastic panels when viewed from certain angles. Clever, the technicals.

She much preferred the looks of a technical to a tellman, but she was common in that. She wished a technical were on the greenroads with her. The moans had the effect of making her receptive—what she saw, looking in mirrors, was a certain shine in her eyes—but there was no chance of a breeding liaison. She was quite unreproductive in this moment of elfstate.

She looked up and saw a figure at least a hundred meters away, sitting on an allowed patch near the path. She walked casually, as gracefully as possible with the stiffness. Not a technical, she saw soon, but she was not disappointed. Too calm.

"Over," he said as she approached.

"Under," she replied. But not by much—he was probably six or seven ship-years old and not easily classifiable.

"Such a fine elfstate," he commented. His hair was black. He was shorter than she, but something in his build reminded her of the glovers. He motioned for her to sit, and she did so with a whuff, massaging her knees.

"Moans?" he asked.

"Bad stretch," she said.

"You're a glover." He was looking at the fading scars on her hands.

"Can't tell what you are," she said.

"Noncombat," he said. "Tuner of the mandates."

She knew very little about the mandates, except that law decreed every ship carry one, and few of the crew were ever allowed to peep. "Noncombat, hm?" She mused. She didn't despise him for that; one never felt strong negatives for a crew member.

"Been working on ours this wake," he said. "Too hard, I guess. Told to talk." Overzealousness in work was considered an erotic trait aboard the *Mellangee*. Still, she didn't feel too receptive toward him.

"Glovers walk after a rough growing," she said.

He nodded. "My name's Clevo."

"Prufax."



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"Combat soon?"

"Hoping. Waiting forever."

"I know. Just been allowed access to the mandate for a half-dozen wakes. All new to me. Very happy."

"Can you talk about it?" she asked. Information about the ship not accessible in certain rates was excellent barter.

"Not sure," he said, frowning. "I've been told caution."

"Well, I'm listening."

He could come from glover stock, she thought, but probably not from technical. He wasn't very muscular, but he wasn't as tall as a glover, or as thin, either.

"If you'll tell me about gloves."

With a smile she held up her hands and wriggled the short, stumpy fingers. "Sure."

The brood mind floated weightless in its tank, held in place by buffered carbon rods. Metal was at a premium aboard the Senexi ships, more out of tradition than actual material limitations.

Aryz floated before the brood mind, all these thoughts coursing through his tissues. He had no central nervous system, no truly differentiated organs except those that dealt with the outside world—limbs, eyes, permea. The brood mind, however, was all central nervous system, a thinly buffered sac of viscous fluids about ten meters wide.

"Have you investigated the human memory device yet?" the brood mind asked.

"I have."

"Is communication with the human shapes possible for us?"

"We have already created interfaces for dealing with their machines. Yes, it seems likely we can communicate."

"Does it strike you that in our long war with humans, we have made no attempt to communicate before?"

This was a complicated question. It called for several qualities that Aryz, as a branch ind, wasn't supposed to have. Inquisitiveness, for one. Branch inds did not ask questions. They exhibited initiative only as offshoots of the brood mind.

He found, much to his dismay, that the question had occurred to him. "We have never captured a human memory store before," he said, by way of incomplete answer. "We could not have communicated without such an extensive source of information."

"Yet, as you say, even in the past we have been able to use human machines."

"The problem is vastly more complex."



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The brood mind paused. "Do you think the teams have been prohibited from communicating with humans?"

Aryz felt the closest thing to anguish possible for a branch ind. Was he being considered unworthy? Accused of conduct inappropriate to a branch ind? His loyalty the brood mind was unshakeable. "Yes."

"And what might our reasons be?"

"Avoidance of pollution."

"Correct. We can no more communicate with them and remain untainted than we can walk on their worlds, breathe their atmosphere." Again, silence. Aryz lapsed into a mode of inactivity. When the brood mind readdressed him, he was instantly aware.

"Do you know how you are different?" it asked.

"I am not . . ." Again, hesitation. Lying to the brood mind was impossible for him. He signaled his distress.

"You are useful to the team," the brood mind said. Aryz calmed instantly. His thoughts became sluggish, receptive. There was a possibility of redemption. But how was he different? "You are to attempt communication with the shapes yourself. You will not engage in any discourse with your fellows while you are so involved." He was banned. "And after completion of this mission and transfer of certain facts to me, you will dissipate."

Aryz struggled with the complexity of the orders. "How am I different, worthy of such a commission?"

The surface of the brood mind was as still as an undisturbed pool. The indistinct black smudges that marked its radiating organs circulated slowly within the interior, then returned, one above the other, to focus on him. "You will grow a new branch ind. It will not have your flaws, but, then again, it will not be useful to me should such a situation come a second time. Your dissipation will be a relief, but it will be regretted."

"How am I different?"

"I think you know already," the brood mind said. "When the time comes, you will feed the new branch ind all your memories but those of human contact. If you do not survive to that stage of its growth, you will pick your fellow who will perform that function for you."

A small pinkish spot appeared on the back of Aryz's globe. He floated forward and placed his largest permeum against the brood mind's cool surface. The key and command were passed, and his body became capable of reproduction. Then the signal of dismissal was given. He left the chamber.

Flowing through the thin stream of liquid ammonia lining the



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corridor, he felt ambiguously stimulated. His was a position of privilege and anathema. He had been blessed—and condemned. Had any other branch ind experienced such a thing?

Then he knew the brood mind was correct. He was different from his fellows. None of them would have asked such questions. None of them could have survived the suggestion of communicating with human shapes. If this task hadn't been given to him, he would have had to dissipate anyway.

The pink spot grew larger, then began to make grayish flakes. It broke through the skin, and casually, almost without thinking, Aryz scraped it off against a bulkhead. It clung, made a radio-frequency emanation something like a sigh, and began absorbing nutrients from the ammonia.

Aryz went to inspect the shapes.

She was intrigued by Clevo, but the kind of interest she felt was new to her. She was not particularly receptive. Rather, she felt a mental gnawing as if she were hungry or had been injected with some kind of brain moans. What Clevo told her about the mandates opened up a topic she had never considered before. How did all things come to be—and how did she figure in them?

The mandates were quite small, Clevo explained, each little more than a cubic meter in volume. Within them was the entire history and culture of the human species, as accurate as possible, culled from all existing sources. The mandate in each ship was updated whenever the ship returned to a contact station.

Clevo had been assigned small tasks—checking data and adding ship records—that had allowed him to sample bits of the mandate. "It's mandated that we have records," he explained, "and what we have, you see, is *man-data*." He smiled. "That's a joke," he said. "Sort of."

Prufrax nodded solemnly. "So where do we come from?"

"Earth, of course," Clevo said. "Everyone knows that."

"I mean, where do *we* come from—you and I, the crew."

"Breeding division. Why ask? You know."

"Yes." She frowned, concentrating. "I mean, we don't come from the same place as the Senexi. The same way."

"No, that's foolishness."

She saw that it was foolishness—the Senexi were different all around. What was she struggling to ask? "Is their fib like our own?"

"Fib? History's not a fib. Not most of it, anyway. Fibs are for unreal. History is over fib."



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She knew, in a vague way, that fibs were unreal. She didn't like to have their comfort demeaned, though. "Fibs are fun," she said. "They teach Zap."

"I suppose," Clevo said dubiously. "Being noncombat, I don't see Zap fibs."

Fibs without Zap were almost unthinkable to her. "Such dull," she said.

"Well, of course you'd say that. I might find Zap fibs dull—think of that?"

"We're different," she said. "Like Senexi are different."

Clevo's jaw hung open. "No way. We're crew. We're human. Senexi are . . ." He shook his head as if fed bitters.

"No, I mean . . ." She paused, uncertain whether she was entering unallowed territory. "You and I, we're fed different, given different moans. But in a big way we're different from Senexi. They aren't made, nor act, as you and I. But . . ." Again it was difficult to express. She was irritated. "I don't want to talk to you anymore."

A tellman walked down the path, not familiar to Prufrax. He held out his hand for Clevo, and Clevo grasped it. "It's amazing," the tellman said, "how you two gravitate to each other. Go, elf-state," he addressed Prufrax. "You're on the wrong greenroad."

She never saw the young researcher again. With glover training under way, the itches he aroused soon faded, and Zap resumed its overplace.

The Senexi had ways of knowing humans were near. As information came in about fleets and individual cruisers less than one percent nebula diameter distant, the seedship seemed warmer, less hospitable. Everything was UV with anxiety, and the new branch ind on the wall had to be shielded by a special silicate cup to prevent distortion. The brood mind grew a corniculum automatically, though the toughened outer membrane would be of little help if the seedship was breached.

Aryz had buried his personal confusion under a load of work. He had penetrated the human memory store deeply enough to find instructions on its use. It called itself a *mandate* and even the simple preliminary directions were difficult for Aryz. It was like swimming in another family's private sea, though of course infinitely more alien; how could he connect with experiences never had, problems and needs never encountered by his kind?

He observed the new branch ind once or twice each watch period. Never before had he seen an induced replacement. The nor-



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mal process was for two brood minds to exchange plasm and form new team buds, then to exchange and nurture the buds. The buds were later cast free to swim as individual larvae. While the larvae swam through the liquid and gas atmosphere of a Senexi world often for thousands, even tens of thousands of kilometers, inevitably they returned to gather with the other buds of their team. Replacements were selected from a separately created pool of "generic" buds only if one or more originals had been destroyed during their wanderings. The destruction of a complete team meant reproductive failure.

In a mature team, only when a branch ind was destroyed did the brood mind induce a replacement. In essence, then, Aryz was already considered dead.

Yet he was still useful. That amused him, if the Senexi emotion could be called amusement. Restricting himself from his fellows was difficult, but he filled the time by immersing himself, through the interface, in the mandate.

The humans were also connected with the mandate through their surrogate parent, and in this manner they were quiescent.

He reported infrequently to the brood mind. Until he had established communication, there was little to report.

And throughout his turmoil, like the others he could sense a fight was coming. It could determine the success or failure of all their work in the nebula. In the grand scheme, failure here might not be crucial. But the Senexi had taken the long view too often in the past.

And he knew himself well enough to doubt he would fail.

He could feel an affinity for the humans already, peering at them through the thick glass wall in their isolated chamber, his skin paling at the thought of their heat, their poisonous chemistry. A diseased affinity. He hated himself for it. And reveled in it. It was what made him particularly useful to the team. If he was defective, and this was the only way he could serve, then so be it.

The other branch inds observed his passings from a distance, making no judgments. Aryz was dead, though he worked and moved. His sacrifice had been fearful. Yet he would not be a hero. His kind could never be emulated.

It was a horrible time, a horrible conflict.

She floated in language, learned it in a trice; there were no distractions. She floated in history and picked up as much as she could, for the source seemed inexhaustible. She tried to distin-



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guish between eyes-open—the barren, pale gray-brown chamber with the thick green wall, beyond which floated a murky roundness—and eyes-shut, when she dropped back into language and history with no fixed foundation.

Eyes-open, she saw the Mam with its comforting limbs and its soft voice, its tubes and extrusions of food and its hissings and removal of waste. Through Mam's wires she learned. Mam also tended another like herself, and another unlike either of them, more like the shape beyond the green wall.

She was very young, and it was all a mystery.

At least she knew her name. And what she was supposed to do. She took small comfort in that.

They fitted Prufrax with her gloves, and she went into the practice chamber, dragged by her gloves almost, for she hadn't yet knitted the plug-in nerves in her right index digit and her pace control was uncertain.

There, for six wakes straight, she flew with the other glovers back and forth across the dark spaces like elfstate comets. Constellations and nebula aspects flashed at random on the distant walls, and she oriented to them like a night-flying bird. Her glovemates were Ornin, an especially slender male, and Ban, a redhaired female, and the special-projects sisters Ya, Trice, and Damu, new from the breeding division.

When she let the gloves have their way, she was freer than she had ever felt before. Control was somewhere uncentered, behind her eyes and beyond her fingers, as if she were drawn on a beautiful silver wire where it was best to go. Doing what was best to do. She barely saw the field that flowed from the grip of the thick, solid gloves or felt its caressing, life-sustaining influence. Truly, she hardly saw or felt anything but situations, targets, opportunities, the success or failure of the Zap. Failure was an acute pain. She was never reprimanded for failure; the reprimand was in her blood, and she felt as if she wanted to die. But then the opportunity would improve, the Zap would succeed, and everything around her—stars, Senexi seedship, the *Mellangee,* everything—seemed part of a beautiful dream all her own.

She was intense in the Mocks.

Their initial practice over, the entry play began.

One by one, the special-projects sisters took their hyperbolic formation. Their glove fields threw out extensions, and they combined force. In they went, the mock Senexi seedship brilliant red and white and UV and radio and hateful before them. Their tails



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swept through the seedship's outer shields and swirled like long silky hair laid on water; they absorbed fantastic energies, grew bright like violent little stars against the seedship outline. They were engaged in the drawing of the shields, and sure as topology, the spirals of force had to have a dimple on the opposite side that would iris wide enough to let in glovers. The sisters twisted the forces, and Prufrax could see the dimple stretching out under them—

The exercise ended. The elfstate glovers were cast into sudden dark. Prufrax came out of the mock unprepared, her mind still bent on the Zap. The lack of orientation drove her as mad as a moth suddenly flipped from night to day. She careened until gently mitted and channeled. She flowed down a tube, the field slowly neutralizing, and came to a halt still gloved, her body jerking and tingling.

"What the breed happened?" she screamed, her hands beginning to hurt.

"Energy conserve," a mechanical voice answered. Behind Prufrax the other elfstate glovers lined up in the catch tube, all but the special-projects sisters. Ya, Trice, and Damu had been taken out of the exercise early and replaced by simulations. There was no way their functions could be mocked. They entered the tube ungloved and helped their comrades adjust to the overness of the real.

As they left the mock chamber, another batch of glovers, even younger and fresher in elfstate, passed them. Ya held her hands up, and they saluted in return. "Breed more every day," Prufrax grumbled. She worried about having so many crew she'd never be able to conduct a satisfactory Zap herself. Where would the honor of being a glover go if everyone was a glover?

She wriggled into her cramped bunk, feeling exhilarated and irritated. She replayed the mocks and added in the missing Zap, then stared gloomily at her small narrow feet.

Out there the Senexi waited. Perhaps they were in the same state as she—ready to fight, testy at being reined in. She pondered her ignorance, her inability to judge whether such things were even possible among the enemy. She thought of the researcher, Clevo. "Blank," she murmured. "Blank, blank." Such thoughts were unnecessary, and humanizing Senexi was unworthy of a glover.

Aryz looked at the instrument, stretched a pod into it, and willed. Vocal human language came out the other end, thin and



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squeaky in the helium atmosphere. The sound disgusted and thrilled him. He removed the instrument from the gelatinous strands of the engineering wall and pushed it into his interior through a stretched permeum. He took a thick draft of ammonia and slid to the human-shapes chamber again.

He pushed through the narrow port into the observation room. Adjusting his eyes to the heat and bright light beyond the transparent wall, he saw the round mutated shape first—the result of their unsuccessful experiments. He swung his sphere around and looked at the others.

For a time he couldn't decide which was uglier—the mutated shape or the normals. Then he thought of what it would be like to have humans tamper with Senexi and try to make them into human forms. . . . He looked at the round human and shrank as if from sudden heat. Aryz had had nothing to do with the experiments. For that, at least, he was grateful.

Aryz placed the tip of the vocalizer against a sound-transmitting plate and spoke.

"Zello," came the sound within the chamber. The mutated shape looked up. It lay on the floor, great bloated stomach backed by four almost useless pods. It usually made high-pitched sounds continuously. Now it stopped and listened, straining on the tube that connected it to the breed-supervising device.

"Hello," replied the *male*. It sat on a ledge across the chamber, having unhooked itself.

The machine that served as surrogate parent and instructor stood in one corner, an awkward parody of a human, with limbs too long and head too small. Aryz could see the unwillingness of the designing engineers to examine human anatomy too closely.

"I am called—" Aryz said, his name emerging as a meaningless stretch of white noise. He would have to do better than that. He compressed and adapted the frequencies. "I am called Aryz."

"Hello," the young female said.

"What are your names?" He knew them well enough, having listened many times to their conversations.

"Prufrax," the female said. "I'm a glover."

The human shapes contained very little genetic memory. As a kind of brood marker, Aryz supposed, they had been equipped with their name, occupation, and the rudiments of environmental knowledge.

"I'm a teacher, Prufrax," Aryz said.

"I don't understand you," the female replied.

"You teach me, I teach you."



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"We have the Mam," the male said, pointing to the machine. "She teaches us." The Mam, as they called it, was hooked into the mandate.

"Do you know where you are?" Aryz asked.

"Where we live," Prufrax said. "Eyes-open."

"Don't talk to it," the male said. "Mam talks to us." Aryz consulted the mandate for some understanding of the name they had given to the breed-supervising machine. Mam, it explained, was probably a natural expression for womb-carrying parent. Aryz severed the machine's power.

"Mam is no longer functional," he said. He would have the engineering wall put together another less identifiable machine to link them to the mandate and to their nutrition. He wanted them to associate comfort and completeness with nothing but himself.

The machine slumped, and the female shape pulled herself free of the hookup. She started to cry, a reaction quite mysterious to Aryz. His link with the mandate had not been intimate enough to answer questions about the wailing and moisture from the eyes. After a time the male and female lay down and became dormant.

The mutated shape made more soft sounds and tried to approach the transparent wall. It held up its thin arms as if beseeching. The others would have nothing to do with it; now it wished to go with him. Perhaps the biologists had partially succeeded in their attempt at transformation; perhaps it was more Senexi than human.

Aryz quickly backed out through the port, into the cool and security of the corridor beyond.

It was an endless orbital dance, this detection and matching of course, moving away and swinging back, deceiving and revealing, between the *Mellangee* and the Senexi seedship.

Filled with her skill and knowledge, Prufrax waited, feeling like a ripe fruit about to fall from the tree. At this point in their training, just before the application, elfstates were most receptive. She was allowed to take a lover, and they were assigned small separate quarters near the outer greenroads.

The contact was satisfactory, as far as it went. Her mate was an older glover named Kumnax, and as they lay back in the cubicle, soothed by air-dance fibs, he told her stories about past battles, special tactics, how to survive.

"Survive?" she asked, puzzled.



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"Of course." His long brown face was intent on the view of the greenroads through the cubicle's small window.

"I don't understand," she said.

"Most glovers don't make it," he said patiently.

"I will."

He turned to her. "You're six," he said. "You're very young. I'm ten. I've seen. You're about to be applied for the first time, you're full of confidence. But most glovers won't make it. They breed thousands of us. We're expendable. We're based on the best glovers of the past but even the best don't survive."

"I will," Prufrax repeated, her jaw set.

"You always say that," he murmured.

Prufrax stared at him for a moment.

"Last time I knew you," he said, "you kept saying that. And here you are, fresh again."

"What last time?"

"Master Kumnax," a mechanical voice interrupted.

He stood, looking down at her. "We glovers always have big mouths. They don't like us knowing, but once we know, what can they do about it?"

"You are in violation," the voice said. "Please report to S."

"But now, if you last, you'll know more than the tellman tells."

"I don't understand," Prufrax said slowly, precisely, looking him straight in the eye.

"I've paid my debt," Kumnax said. "We glovers stick. Now I'm going to go get my punishment." He left the cubicle. Prufrax didn't see him again before her first application.

The seedship buried itself in a heating protostar, raising shields against the infalling ice and stone. The nebula had congealed out of a particularly rich cluster of exploded fourth- and fifth-generation stars, thick with planets, the detritus of which now fell on Aryz's ship like hail.

Aryz had never been so isolated. No other branch ind addressed him; he never even saw them now. He made his reports to the brood mind, but even there the reception was warmer and warmer, until he could barely endure to communicate. Consequently—and he realized this was part of the plan—he came closer to his charges, the human shapes.

The brood mind was interested in one question: how successfully could they be planted aboard a human ship? Would they be accepted until they could carry out their sabotage, or would they



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be detected? Already Senexi instructions were being coded into their teachings.

"I think they will be accepted in the confusion of an engagement," Aryz answered. He had long since guessed the general outlines of the brood mind's plans. Communication with the human shapes was for one purpose only, to use them as decoys, insurgents. They were weapons. Knowledge of human activity and behavior was not an end in itself; seeing what was happening to him, Aryz fully understood why the brood mind wanted such study to proceed no further.

He would lose them soon, he thought, and his work would be over. He would be much too human-tainted. He would end, and his replacement would start a new existence, very little different from Aryz's—but, he reasoned, adjusted. The replacement would not have Aryz's peculiarity.

He approached his last meeting with the brood mind, preparing himself for his final work, for the ending. In the cold liquid-filled chamber, the great red-and-white sac waited, the center of his team, his existence. He adored it. There was no way he could criticize its action.

Yet—

"We are being sought," the brood mind radiated. "Are the shapes ready?"

"Yes," Aryz said. "The new teaching is firm. They believe they are fully human." And, except for the new teaching, they were. "They defy sometimes." He said nothing about the mutated shape. It would not be used. If they won this encounter, it would probably be placed with Aryz's body in a fusion torch for complete purging.

"Then prepare them," the brood mind said. "They will be delivered to the vector for positioning and transfer."

Darkness and waiting. Prufrax nested in her delivery tube like a freshly chambered round. Through her gloves she caught distant communications murmurs that resembled voices down hollow pipes. The *Mellangee* was coming to full readiness.

Huge as her ship was, Prufrax knew that it would be dwarfed by the seedship. She could recall some hazy details about the seedship's structure, but most of that information was stored securely away from interference by her conscious mind.

More information would be fed to her just before the launch, but she knew the general procedure. The seedship was deep in a protostar, hiding behind the distortion of geometry and the complete hash of electromagnetic energy. The *Mellangee* would



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approach, collide if need be. Penetrate. Release. Find. Zap. Her fingers ached. Sometime before the launch she would also be fed her final moans—the tempers—and she would be primed to leave elfstate. She would be a mature glover. She would be a woman.

If she returned

*will return.*

Her fingers ached worse.

The tempers came, moans tiding in, then the battle data. As it passed into her subconscious, she caught a flash of—

Rocks and ice, a thick cloud of dust and gas glowing red but seeming dark, no stars, no constellation guides this time. The beacon came on. That would be her only way to orient once the gloves stopped inertial and locked onto the target.

The seedship
was like
a shadow within a shadow
twenty-two kilometers across, yet
carrying
only six
teams
LAUNCH *she flies!*

*Data*: The *Mellangee* has buried herself in the seedship, plowed deep into the interior like a carnivore's muzzle looking for vitals

*Instruction* a swarm of seeks is dashing through the seedship, looking for the brood minds, for the brood chambers, for branch inds. The glovers will follow.

Prufrax sees herself clearly now. She is the great avenging comet, bringer of omen and doom, like a knife moving through the glass and ice and thin, cold helium as if they weren't there, the chambered round fired and tearing at hundreds of kilometers an hour through the Senexi vessel, following the seeks.

The seedship cannot withdraw into higher geometries now. It is pinned by the *Mellangee*. It is hers.

Information floods her, pleases her immensely. She swoops down orange-and-gray corridors, buffeting against the walls like a ricocheting bullet. Almost immediately she comes across a branch ind, sliding through the ammonia film against the outrushing wind, trying to reach an armored cubicle. Her first Zap is too easy, not satisfying, nothing like what she thought. In her wake the branch ind becomes scattered globules of plasma. She plunges deeper.

Aryz delivers his human charges to the vectors that will launch



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them. They are equipped with simulations of the human weapons, their hands encased in the hideous gray gloves.

The seedship is in deadly peril; the battle has almost been lost at one stroke. The seedship cannot remain whole. It must self-destruct, taking the human ship with it, leaving only a fragment with as many teams as can escape.

The vectors launch the human shapes. Aryz tries to determine which part of the ship will be elected to survive; he must not be there. His job is over, and he must die.

The glovers fan out through the seedship's central hollow, demolishing the great cold drive engines, bypassing the shielded fusion flare and the reprocessing plant, destroying machinery built before their Earth was formed.

The special-projects sisters take the lead. Suddenly they are confused. They have found a brood mind, but it is not heavily protected. They surround it, prepare for the Zap—

It is sacrificing itself, drawing them into an easy kill and away from another portion of the seedship. Power is concentrating elsewhere. Sensing that, they kill quickly and move on.

Aryz's brood mind prepares for escape. It begins to wrap itself in flux bind as it moves through the ship toward the frozen fragment. Already three of its five branch inds are dead; it can feel other brood minds dying. Aryz's bud replacement has been killed as well.

Following Aryz's training, the human shapes rush into corridors away from the main action. The special-projects sisters encounter the decoy male, allow it to fly with them . . . until it aims its weapons. One Zap almost takes out Trice. The others fire on the shape immediately. He goes to his death weeping, confused from the very moment of his launch.

The fragment in which the brood mind will take refuge encompasses the chamber where the humans had been nurtured, where the mandate is still stored. All the other brood minds are dead, Aryz realizes; the humans have swept down on them so quickly. What shall he do?

Somewhere, far off, he feels the distressed pulse of another branch ind dying. He probes the remains of the seedship. He is the last. He cannot dissipate now; he must ensure the brood mind's survival.

Prufrax, darting through the crumbling seedship, searching for more opportunities, comes across an injured glover. She calls for a mediseek and pushes on.

The brood mind settles into the fragment. Its support system



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is damaged; it is entering the time-isolated state, the flux bind, more rapidly than it should. The seals of foamed electric ice cannot quite close off the fragment before Ya, Trice, and Damu slip in. They frantically call for bind cutters and preservers; they have instructions to capture the last brood mind, if possible.

But a trap falls upon Ya, and snarling fields tear her from her gloves. She is flung down a dark disintegrating shaft, red cracks opening all around as the seedship's integrity fails. She trails silver dust and freezes, hits a barricade, shatters.

The ice seals continue to close. Trice is caught between them and pushes out frantically, blundering into the region of the intensifying flux bind. Her gloves break into hard bits, and she is melded into an ice wall like an insect trapped on the surface of a winter lake.

Damu sees that the brood mind is entering the final phase of flux bind. After that they will not be able to touch it. She begins a desperate Zap.

and is too late.

Aryz directs the subsidiary energy of the flux against her. Her Zap deflects from the bind region, she is caught in an interference pattern and vibrates until her tiniest particles stop their knotted whirlpool spins and she simply becomes

space and searing light.

The brood mind, however, has been damaged. It is losing information from one portion of its anatomy. Desperate for storage, it looks for places to hold the information before the flux bind's last wave.

Aryz directs an interface onto the brood mind's surface. The silvery pools of time binding flicker around them both. The brood mind's damaged sections transfer their data into the last available storage device—the human mandate.

Now it contains both human and Senexi information.

The silvery pools unite, and Aryz backs away. No longer can he sense the brood mind. It is out of reach but not yet safe. He must propel the fragment from the remains of the seedship. Then he must wrap the fragment in its own flux bind, cocoon it in physics to protect it from the last ravages of the humans.

Aryz carefully navigates his way through the few remaining corridors. The helium atmosphere has almost completely dissipated, even there. He strains to remember all the procedures. Soon the seedship will explode, destroying the human ship. By then they must be gone.

Angry red, Prufrax follows his barely sensed form, watching



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him behind barricades of ice, approaching the moment of a most satisfying Zap. She gives her gloves their way

and finds a shape behind her, wearing gloves that are not gloves, not like her own, but capable of grasping her in tensed fields, blocking the Zap, dragging them together. The fragment separates, heat pours in from the protostar cloud. They are swirled in their vortex of power, twin locked comets—one red, one sullen gray.

"Who are you?" Prufrax screams as they close in on each other in the fields. Their environments meld. They grapple. In the confusion, the darkening, they are drawn out of the cloud with the fragment, and she sees the other's face.

Her own.

The seedship self-destructs. The fragment is propelled from the protostar, above the plane of what will become planets in their orbits, away from the crippled and dying *Mellangee.*

Desperate, Prufrax uses all her strength to drill into the fragment. Helium blows past them, and bits of dead branch inds.

Aryz catches the pair immediately in the shapes chamber, rearranging the fragment's structure to enclose them with the mutant shape and mandate. For the moment he has time enough to concentrate on them. They are dangerous. They are almost equal to each other, but his shape is weakening faster than the true glover. They float, bouncing from wall to wall in the chamber, forcing the mutant to crawl into a corner and howl with fear.

There may be value in saving the one and capturing the other. Involved as they are, the two can be carefully dissected from their fields and induced into a crude kind of sleep before the glover has a chance to free her weapons. He can dispose of the gloves—fake and real—and hook them both to the Mam, reattach the mutant shape as well. Perhaps something can be learned from the failure of the experiment.

The dissection and capture occur faster than the planning. His movement slows under the spreading flux bind. His last action, after attaching the humans to the Mam, is to make sure the brood mind's flux bind is properly nested within that of the ship.

The fragment drops into simpler geometries.

It is as if they never existed.

The battle was over. There were no victors. Aryz became aware of the passage of time, shook away the sluggishness, and crawled through painfully dry corridors to set the environmental equip-



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ment going again. Throughout the fragment, machines struggled back to activity.

How many generations? The constellations were unrecognizable. He made star traces and found familiar spectra and types, but advanced in age. There had been a malfunction in the overall flux bind. He couldn't find the nebula where the battle had occurred. In its place were comfortably middle-aged stars surrounded by young planets.

Aryz came down from the makeshift observatory. He slid through the fragment, established the limits of his new home, and found the solid mirror surface of the brood mind's cocoon. It was still locked in flux bind, and he knew of no way to free it. In time the bind would probably wear off—but that might require life spans. The seedship was gone. They had lost the brood chamber, and with it the stock.

He was the last branch ind of his team. Not that it mattered now; there was nothing he could initiate without a brood mind. If the flux bind was permanent, then he might as well be dead.

He closed his thoughts around him and was almost completely submerged when he sensed an alarm from the shapes chamber. The interface with the mandate had turned itself off; the new version of the Mam was malfunctioning. He tried to repair the equipment, but without the engineer's wall he was almost helpless. The best he could do was rig a temporary nutrition supply through the old human-form Mam. When he was done, he looked at the captive and the two shapes, then at the legless, armless Mam that served as their link to the interface and life itself.

She had spent her whole life in a room barely eight by ten meters, and not much taller than her own height. With her had been Grayd and the silent round creature whose name—if it had any—they had never learned. For a time there had been Mam, then another kind of Mam not nearly as satisfactory. She was hardly aware that her entire existence had been miserable, cramped, in one way or another incomplete.

Separated from them by a transparent partition, another round shape had periodically made itself known by voice or gesture.

Grayd had kept her sane. They had engaged in conspiracy. Removing themselves from the interface—what she called "eyes-shut"—they had held onto each other, tried to make sense out of what they knew instinctively, what was fed them through the interface, and what the being beyond the partition told them.

First they knew their names, and they knew that they were



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glovers. They knew that glovers were fighters. When Aryz passed instruction through the interface on how to fight, they had accepted it eagerly but uneasily. It didn't seem to jibe with instructions locked deep within their instincts.

Five years under such conditions had made her introspective. She expected nothing, sought little beyond experience in the eyes-shut. Eyes-open with Grayd seemed scarcely more than a dream. They usually managed to ignore the peculiar round creature in the chamber with them; it spent nearly all its time hooked to the mandate and the Mam.

Of one thing only was she completely sure. Her name was Prufrax. She said it in eyes-open and eyes-shut, her only certainty.

Not long before the battle, she had been in a condition resembling dreamless sleep, like a robot being given instructions. The part of Prufrax that had taken on personality during eyes-shut and eyes-open for five years had been superseded by the fight instructions Aryz had programmed. She had flown as glovers must fly (though the gloves didn't seem quite right). She had fought, grappling (she thought) with herself, but who could be certain of anything?

She had long since decided that reality was not to be sought too avidly. After the battle she fell back into the mandate—into eyes-shut—all too willingly.

But a change had come to eyes-shut, too. Before the battle, the information had been selected. Now she could wander through the mandate at will. She seemed to smell the new information, completely unfamiliar, like a whiff of ocean. She hardly knew where to begin. She stumbled across:

**—that all vessels carry one, no matter what their size or class, just as every individual carries the map of a species. The mandate shall contain all the information of our kind, including accurate and uncensored history, for if we have learned anything, it is that censored and untrue accounts distort the eyes of the leaders. Unders are told lies. Leaders must seek and be provided with accounts as accurate as possible, or we will be weakened and fall—**

What wonderful dreams the *leaders* must have had. And they possessed some intrinsic gift called *truth*, through the use of the *mandate*. Prufrax could hardly believe that. As she made her tentative explorations through the new fields of eyes-shut, she began to link the word *mandate* with what she experienced. That was where she was.



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And she was alone. Once, she had explored with Grayd. Now there was no sign of Grayd.

She learned quickly. Soon she walked along a beach on Earth, then a beach on a world called Myriadne, and other beaches, fading in and out. By running through the entries rapidly, she came up with a blurred *eidos* and so learned what a beach was in the abstract. It was a boundary between one kind of eyes-shut and another, between water and land, neither of which had any corollary in eyes-open.

Some beaches had sand. Some had clouds—the *eidos* of clouds was quite attractive. And one—

had herself running scared, screaming.

She called out, but the figure vanished. Prufrax stood on a beach under a greenish-yellow star, on a world called Kyrene, feeling lonelier than ever.

She explored further, hoping to find Grayd, if not the figure that looked like herself. Grayd wouldn't flee from her. Grayd would—

The round thing confronted her, its helpless limbs twitching. Now it was her turn to run, terrified. Never before had she met the round creature in eyes-shut. It was mobile; it had a purpose. Over land, clouds, trees, rocks, wind, air, equations, and an edge of physics she fled. The farther she went, the more distant from the round one with hands and small head, the less afraid she was.

She never found Grayd.

The memory of the battle was fresh and painful. She remembered the ache of her hands, clumsily removed from the gloves. Her environment had collapsed and been replaced by something indistinct. Prufrax had fallen into a deep slumber and had dreamed.

The dreams were totally unfamiliar to her. If there was a left-turning in her arc of sleep, she dreamed of philosophies and languages and other things she couldn't relate to. A right-turning led to histories and sciences so incomprehensible as to be nightmares.

It was a most unpleasant sleep, and she was not at all sorry to find she wasn't really asleep.

The crucial moment came when she discovered how to slow her turnings and the changes of dream subject. She entered a pleasant place of which she had no knowledge but which did not seem threatening. There was a vast expanse of water, but it didn't terrify her. She couldn't even identify it as water until she scooped



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up a handful. Beyond the water was a floor of shifting particles. Above both was an open expanse, not black but obviously space, drawing her eyes into intense pale blue-green. And there was that figure she had encountered in the seedship. Herself. The figure pursued. She fled.

Right over the boundary into Senexi information. She knew then that what she was seeing couldn't possibly come from within herself. She was receiving data from another source. Perhaps she had been taken captive. It was possible she was now being forcibly debriefed. The tellman had discussed such possibilities, but none of the glovers had been taught how to defend themselves in specific situations. Instead it had been stated—in terms that brooked no second thought—that self-destruction was the only answer. So she tried to kill herself.

She sat in the freezing cold of a red-and-white room, her feet meeting but not touching a fluid covering on the floor. The information didn't fit her senses—it seemed blurred, inappropriate. Unlike the other data, this didn't allow participation or motion. Everything was locked solid.

She couldn't find an effective means of killing herself. She resolved to close her eyes and simply will herself into dissolution. But closing her eyes only moved her into a deeper or shallower level of deception—other categories, subjects, visions. She couldn't sleep, wasn't tired, couldn't die.

Like a leaf on a stream, she drifted. Her thoughts untangled, and she imagined herself floating on the water called ocean. She kept her eyes open. It was quite by accident that she encountered:

**Instruction. Welcome to the introductory use of the mandate. As a noncombat processor, your duties are to maintain the mandate, provide essential information for your overs, and, if necessary, protect or destroy the mandate. The mandate is your immediate over. If it requires maintenance, you will oblige. Once linked with the mandate, as you are now, you may explore any aspect of the information by requesting delivery. To request delivery, indicate the core of your subject—**

Prufrax! she shouted silently. What is Prufrax?

A voice with different tone immediately took over.

**Ah, now that's quite a story. I was her biographer, the organizer of her life tapes (ref. GEORGE MACKNAX), and knew her well in the last years of her life. She was born in the Ferment 26468. Here are selected life tapes. Choose emphasis. Analyses follow.**



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* * *

—Hey! Who are you? There's someone here with me. . . .
—Shh! Listen. Look at her. Who is she?
They looked, listened to the information.
—Why, she's *me* . . . sort of.
—She's *us*.

She stood two and a half meters tall. Her hair was black and thick, though cut short; her limbs well muscled though drawn out by the training and hormonal treatments. She was seventeen years old, one of the few birds born in the solar system, and for the time being she had a chip on her shoulder. Everywhere she went, the birds asked about her mother, Jay-ax. "You better than her?"

Of course not! Who could be? But she was good; the instructors said so. She was just about through training, and whether she graduated to hawk or remained bird she would do her job well. Asking Prufrax about her mother was likely to make her set her mouth tight and glare.

On Mercior, the Grounds took up four thousand hectares and had its own port. The Grounds was divided into Land, Space, and Thought, and training in each area was mandatory for fledges, those birds embarking on hawk training. Prufrax was fledge three. She had passed Land—though she loathed downbound fighting—and was two years into Space. The tough part, everyone said, was not passing Space, but lasting through four years of Thought after the action in nearorbit and planetary.

Since she had been a little girl, no more than five—
—Five! Five what?
and had seen her mother's ships and fightsuits and fibs, she had known she would never be happy until she had ventured far out and put a seedship in her sights, had convinced a Senexi of the overness of end—
—The Zap! She's talking the Zap!
—What's that?
—You're me, you should know.
—I'm not you, and we're not her.
**The Zap,** said the mandate, and the data shifted.

"Tomorrow you receive your first implants. These will allow you to coordinate with the zero-angle phase engines and find your targets much more rapidly than you ever could with simple biologic. Are there any questions?"

"Yes, sir." Prufrax stood at the top of the spherical classroom,



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causing the hawk instructor to swivel his platform. "I'm having problems with the zero-angle phase maths. Reduction of the momenta of the real."

Other fledge threes piped up that they, too, had had trouble with those maths. The hawk instructor sighed. "We don't want to install cheaters in all of you. It's bad enough needing implants to supplement biologic. Individual learning is much more desirable. Do you request cheaters?" That was a challenge. They all responded negatively, but Prufrax had a secret smile. She knew the subject. She just took delight in having the maths explained again. She could reinforce an already thorough understanding. Others not so well versed would benefit. She wasn't wasting time. She was in the pleasure of her weapon—the weapon she would be using against the Senexi.

"Zero-angle phase is the temporary reduction of the momenta of the real." Equations and plexes appeared before each student as the instructor went on. "Nested unreals can conflict if a barrier is placed between the participator princip and the assumption of the real. The effectiveness of the participator can be determined by a convenience model we call the angle of phase. Zero-angle phase is achieved by an opaque probability field according to modified Fourier of the separation of real waves. This can also be caused by the reflection of the beam—an effective counter to zero-angle phase, since the beam is always compoundable and the compound is always time-reversed. Here are the true gedanks—"

—Zero-angle phase. She's learning the Zap.

—She hates them a lot, doesn't she?

—The Senexi? They're Senexi.

—I think . . . eyes-open is the world of the Senexi. What does that mean?

—That we're prisoners. You were caught before me.

—Oh.

The news came as she was in recovery from the implant. Seedships had violated human space again, dropping cuckoos on thirty-five worlds. The worlds had been young colonies, and the cuckoos had wiped out all life, then tried to reseed with Senexi forms. The overs had reacted by sterilizing the planets' surfaces. No victory, loss to both sides. It was as if the Senexi were so malevolent they didn't care about success, only about destruction.

She hated them. She could imagine nothing worse.

Prufrax was twenty-three. In a year she would be qualified to hawk on a cruiser/raider. She would demonstrate her hatred.



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Aryz felt himself slipping into endthought, the mind set that always preceded a branch ind's self-destruction. What was there for him to do? The fragment had survived, but at what cost, to what purpose? Nothing had been accomplished. The nebula had been lost, or he supposed it had. He would likely never know the actual outcome.

He felt a vague irritation at the lack of a spectrum of responses. Without a purpose, a branch ind was nothing more than excess plasm.

He looked in on the captive and the shapes, all hooked to the mandate, and wondered what he would do with them. How would humans react to the situation he was in? More vigorously, probably. They would fight on. They always had. Even without leaders, with no discernible purpose, even in defeat. What gave them such stamina? Were they superior, more deserving? If they were better, then was it right for the Senexi to oppose their triumph?

Aryz drew himself tall and rigid with confusion. He had studied them too long. They had truly infected him. But here at least was a hint of purpose. A question needed to be answered.

He made preparations. There were signs the brood mind's flux bind was not permanent, was in fact unwinding quite rapidly. When it emerged, Aryz would present it with a judgment, an answer.

He realized, none too clearly, that by Senexi standards he was now a raving lunatic.

He would hook himself into the mandate, improve the somewhat isolating interface he had used previously to search for selected answers. He, the captive, and the shapes would be immersed in human history together. They would be like young suckling on a Population I mother-animal—just the opposite of the Senexi process, where young fed nourishment and information into the brood mind.

The mandate would nourish, or poison. Or both.

—Did she love?

—What—you mean, did she receive?

—No, did she—we—I—give?

—I don't know what you mean.

—I wonder if *she* would know what I mean. . . .

**Love,** said the mandate, and the data proceeded.

Prufrax was twenty-nine. She had been assigned to a cruiser in a new program where superior but untested fighters were put into thick action with no preliminary.



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The Cruiser was a million-ton raider, with a hawk contingent of fifty-three and eighty regular crew. She would be used in a secondwave attack, following the initial hardfought.

She was scared. That was good; fright improved basic biologic, if properly managed. The cruiser would make a raid into Senexi space and retaliate for past cuckoo-seeding programs. They would come up against thornships and seedships, probably.

The fighting was going to be fierce.

The raider made its final denial of the overness of the real and pipsqueezed into an arduous, nasty sponge space. It drew itself together again and emerged far above the galactic plane.

Prufrax sat in the hawks wardroom and looked at the simulated rotating snowball of stars. Red-coded numerals flashed along the borders of known Senexi territory, signifying where they had first come to power when the terrestrial sun had been a mist-wrapped youngster. A green arrow showed the position of the raider.

She drank sponge-space supplements with the others but felt isolated because of her firstness, her fear. Everyone seemed so calm. Most were fours or fives—on their fourth or fifth battle call. There were ten ones and an upper scatter of experienced hawks with nine to twenty-five battles behind them. There were no thirties. Thirties were rare in combat; the few that survived so many engagements were plucked off active and retired to PR service under the polinstructors. They often ended up in fibs, acting poorly, looking unhappy.

Still, when she had been more naive, Prufrax's heros had been a man-and-woman thirty team she had watched in fib after fib—Kumnax and Arol. They had been better actors than most.

Day in, day out, they drilled in their fightsuits. While the crew bustled, hawks were put through implant learning, what slang was already calling the Know, as opposed to the Tell, of classroom teaching. Getting background, just enough to tickle her curiosity, not enough to stimulate morbid interest.

—There it is again. Feel?

—I know it. Yes. The round one, part of eyes-open . . .

—Senexi?

—No, brother without name.

—Your . . . brother?

—No . . . I don't know.

Still, there were items of information she had never received before, items privileged only to the fighters, to assist them in their work. Older hawks talked about the past, when data had been freely available. Stories circulated in the wardroom about



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the Senexi, and she managed to piece together something of their origins and growth.

Senexi worlds, according to a twenty, had originally been large, cold masses of gas circling bright young suns nearly metal-free. Their gas-giant planets had orbited the suns at hundreds of millions of kilometers and had been dusted by the shrouds of neighboring dead stars; the essential elements carbon, nitrogen, silicon, and fluorine had gathered in sufficient quantities on some of the planets to allow Population II biology.

In cold ammonia seas, lipids had combined in complex chains. A primal kind of life had arisen and flourished. Across millions of years, early Senexi forms had evolved. Compared with evolution on Earth, the process at first had moved quite rapidly. The mechanisms of procreation and evolution had been complex in action, simple in chemistry.

There had been no competition between life forms of different genetic bases. On Earth, much time had been spent selecting between the plethora of possible ways to pass on genetic knowledge.

And among the early Senexi, outside of predation there had been no death. Death had come about much later, self-imposed for social reasons. Huge colonies of protoplasmic individuals had gradually resolved into the team-forms now familiar.

Soon information was transferred through the budding of branch inds; cultures quickly developed to protect the integrity of larvae, to allow them to regroup and form a new brood mind. Technologies had been limited to the rare heavy materials available, but the Senexi had expanded for a time with very little technology. They were well adapted to their environment, with few predators and no need to hunt, absorbing stray nutrients from the atmosphere and from layers of liquid ammonia. With perceptions attuned to the radio and microwave frequencies, they had before long turned groups of branch inds into radio telescope chains, piercing the heavy atmosphere and probing the universe in great detail, especially the very active center of the young galaxy. Huge jets of matter, streaming from other galaxies and emitting high-energy radiation, had provided laboratories for their vicarious observations. Physics was a primitive science to them.

Since little or no knowledge was lost in breeding cycles, cultural growth was rapid at times; since the dead weight of knowledge was often heavy, cultural growth often slowed to a crawl.

Using water as a building material, developing techniques that



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humans still understood imperfectly, they prepared for travel away from their birthworlds.

Prufrax wondered, as she listened to the older hawks, how humans had come to know all this. Had Senexi been captured and questioned? Was it all theory? Did anyone really know—anyone she could ask?

—She's weak.

—Why weak?

—Some knowledge is best for glovers to ignore. Some questions are best left to the supreme overs.

—Have you thought that in here, you can answer her questions, our questions?

—No. No. Learn about me—us—first.

In the hour before engagement, Prufrax tried to find a place alone. On the raider, this wasn't difficult. The ship's size was overwhelming for the number of hawks and crew aboard. There were many areas where she could put on an environs and walk or drift in silence, surrounded by the dark shapes of equipment wrapped in plexerv.

She pulled herself through the cold G-less tunnels, feeling slightly awed by the loneness, the quiet. One tunnel angled outboard, toward the hull of the cruiser. She hesitated, peering into its length with her environs beacon, when a beep warned her she was near another crew member. She was startled to think someone else might be as curious as she. She scooted expertly up the tunnel, spreading her arms and tucking her legs as she would in a fightsuit.

The tunnel was filled with a faint milky green mist, absorbing her environs beam. It couldn't be much more than a couple of hundred meters long, however, and it was quite straight. The signal beeped louder.

Ahead she could make out a dismantled weapons blister. That explained the fog: a plexerv aerosol diffused in the low pressure. Sitting in the blister was a man, his environs glowing a pale violet. He had deopaqued a section of the blister and was staring out at the stars. He swiveled as she approached and looked her over dispassionately. He seemed to be a hawk—he had fightform, tall, thin with brown hair above hull-white skin, large eyes with pupils so dark she might have been looking through his head into space beyond.

"Under," she said as their environs met and merged.

"Over. What are you doing here?"

"I was about to ask you the same."



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"You should be getting ready for the fight," he admonished.

"I am. I need to be alone for a while."

"Yes." He turned back to the stars. "I used to do that, too."

"You don't fight now?"

He shook his head. "Retired. I'm a researcher."

She tried not to look impressed. Crossing rates was almost impossible. A bitalent was unusual in the service.

"What kind of research?" she asked.

"I'm here to correlate enemy finds."

"Won't find much of anything, after we're done with the zero phase."

It would have been polite for him to say, "Power to that," or offer some other encouragement. He said nothing.

"Why would you want to research them?"

"To fight an enemy properly, you have to know what they are. Ignorance is defeat."

"You research tactics?"

"Not exactly."

"What, then?"

"You'll be in tough hardfought this wake. Make you a proposition. You fight well, observe, come to me, and tell me what you see. Then I'll answer your questions."

"Brief you before my immediate overs?"

"I have the authority," he said. No one had ever lied to her; she didn't even suspect he would. "You're eager?"

"Very."

"You'll be doing what?"

"Engaging Senexi fighters, then hunting down branch inds and brood minds."

"How many fighters going in?"

"Twelve."

"Big target, eh?"

She nodded.

"While you're there, ask yourself—what are they fighting for? Understand?"

"I—"

"Ask, what are they fighting for. Just that. Then come back to me."

"What's your name?"

"Not important," he said. "Now go."

She returned to the prep center as the sponge-space warning tones began. Overhawks went among the fighters in the lineup, checking gear and giveaway body points for mental orientation.



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Prufrax submitted to the molded sensor mask being slipped over her face. "Ready!" the overhawk said. "Hardfought!" He clapped her on the shoulder. "Good luck."

"Thank you, sir." She bent down and slid into her fightsuit. Along the launch line, eleven other hawks did the same. The overs and other crew left the chamber, and twelve red beams delineated the launch tube. The fightsuits automatically lifted and aligned on their individual beams. Fields swirled around them like silvery tissue in moving water, then settled and hardened into cold scintillating walls, pulsing as the launch energy built up.

The tactic came to her. The ship's sensors became part of her information net. She saw the Senexi thornship—twelve kilometers in diameter, cuckoos lacing its outer hull like maggots on red fruit, snakes waiting to take them on.

She was terrified and exultant, so worked up that her body temperature was climbing. The fightsuit adjusted her balance.

At the count of ten and nine, she switched from biologic to cyber. The implant—after absorbing much of her thought processes for weeks—became Prufrax.

For a time there seemed to be two of her. Biologic continued, and in that region she could even relax a bit, as if watching a fib.

With almost dreamlike slowness, in the electronic time of cyber, her fightsuit followed the beam. She saw the stars and oriented herself to the cruiser's beacon, using both for reference, plunging in the sword-flower formation to assault the thornship. The cuckoos retreated in the vast red hull like worms withdrawing into an apple. Then hundreds of tiny black pinpoints appeared in the quadrant closest to the sword flower.

Snakes shot out, each piloted by a Senexi branch ind. "Hardfought!" she told herself in biologic before that portion gave over completely to cyber.

*Why were we flung out of dark*
*through ice and fire, a shower*
*of sparks? a puzzle;*
*Perhaps to build hell.*

*We strike here, there;*
*Set brief glows, fall through*
*and cross round again.*

*By our dimming, we see what*



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*Beatitude we have.*
*In the circle, kindling*
*together, we form an*
*exhausted Empyrean.*
*We feel the rush of*
*igniting winds but still*
*grow dull and wan.*

*New rage flames, new light,*
*dropping like sun through muddy*
*ice and night and fall*
*Close, spinning blue and bright.*

*In time they, too,*
*Tire. Redden.*
*We join, compare pasts*
*cool in huddled paths,*
*turn gray.*

*And again.*
*We are a companion flow*
*of ash, in the slurry,*
*out and down.*
*We sleep.*

*Rivers form above and below.*
*Above, iron snakes twist,*
*clang and slice, chime,*
*helium eyes watching, seeing*
*Snowflake hawks,*
*signaling adamant muscles and*
*energy teeth. What hunger*
*compels our venom spit?*

*It flies, strikes the crystal*
*flight, making mist gray-green*
*with ammonia rain.*

*Sleeping we glide,*
*and to each side*
*unseen shores wait*
*with the moans of an*
*unseen tide.*



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—She wrote that. We. One of her—our—poems.
—Poem?
—A kind of fib, I think.
—I don't see what it says.
—Sure you do! She's talking hardfought.
—Do you understand it?
—Not all . . .

She lay back in the bunk, legs crossed, eyes closed, feeling the receding dominance of the implant—the overness of cyber—and the almost pleasant ache in her back. She had survived her first. The thornship had retired, severely damaged, its surface seared and scored so heavily it would never release cuckoos again.

It would become a hulk, a decoy. Out of action. *Satisfaction/out of action/ Satisfaction . . .*

Still, with eight of the twelve fighters lost, she didn't quite feel the exuberance of the rhyme. The snakes had fought very well. Bravely, she might say. They lured, sacrificed, cooperated, demonstrating teamwork as fine as that in her own group. Strategy was what made the cruiser's raid successful. A superior approach, an excellent tactic. And perhaps even surprise, though the final analysis hadn't been posted yet.

Without those advantages, they might have all died.

She opened her eyes and stared at the pattern of blinking lights in the ceiling panel, lights with their secret codes that repeated every second, so that whenever she looked at them, the implant deep inside was debriefed, reinstructed. Only when she fought would she know what she was now seeing.

She returned to the tunnel as quickly as she was able. She floated up toward the blister and found him there, surrounded by packs of information from the last hardfought. She waited until he turned his attention to her.

"Well?" he said.

"I asked myself what they are fighting for. And I'm very angry."

"Why?"

"Because I don't know. I *can't* know. They're Senexi."

"Did they fight well?"

"We lost eight. Eight." She cleared her throat.

"Did they fight well?" he repeated, an edge in his voice.

"Better than I was ever told they could."

"Did they die?"

"Enough of them."

"How many did you kill?"



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"I don't know." But she did. Eight.

"You killed eight," he said, pointing to the packs. "I'm analyzing the battle now."

"You're behind what we read, what gets posted?" she asked.

"Partly," he said. "You're a good hawk."

"I knew I would be," she said, her tone quiet, simple.

"Since they fought bravely—"

"How can Senexi be brave?" she asked sharply.

"Since," he repeated, "they fought bravely, why?"

"They want to live, to do their . . . work. Just like me."

"No," he said. She was confused, moving between extremes in her mind, first resisting, then giving in too much. "They're Senexi. They're not like us."

"What's your name?" she asked, dodging the issue.

"Clevo."

Her glory hadn't even begun yet, and already she was well into her fall.

Aryz made his connection and felt the brood mind's emergency cache of knowledge in the mandate grow up around him like ice crystals on glass. He stood in a static scene. The transition from living memory to human machine memory had resulted in either a coding of data or a reduction of detail; either way, the memory was cold, not dynamic. It would have to be compared, recorrelated, if that would ever be possible.

How much human data had had to be dumped to make space for this?

He cautiously advanced into the human memory, calling up topics almost at random.

He backed away from sociological data, trying to remain within physics and mathematics. There he could make conversions to fit his understanding without too much strain.

Then something unexpected happened. He felt the brush of another mind, a gentle inquiry from a source made even stranger by the hint of familiarity. It made what passed for a Senexi greeting, but not in the proper form, using what one branch ind of a team would radiate to a fellow; a gross breach, since it was obviously not from his team or even from his family. Aryz tried to withdraw. How was it possible for minds to meet in the mandate? As he retreated, he pushed into a broad region of incomprehensible data. It had none of the characteristics of the other human regions he had examined.

—This is for machines, the other said. —Not all cultural data



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are limited to biologic. You are in the area where programs and cyber designs are stored. They are really accessible only to a machine hooked into the mandate.

—What is your family? Aryz asked, the first step-question in the sequence Senexi used for urgent identity requests.

—I have no family. I am not a branch ind. No access to active brood minds. I have learned from the mandate.

—Then what are you?

—I don't know, exactly. Not unlike you.

It was the mind of the mutated shape, the one that had remained in the chamber, beseeching when he approached the transparent barrier.

—I must go now, the shape said. Aryz was alone again in the incomprehensible jumble. He moved slowly, carefully, into the Senexi sector, calling up subjects familiar to him. If he could encounter one shape, doubtless he could encounter the others —perhaps even the captive.

The idea was dreadful—and fascinating. So far as he knew, such intimacy between Senexi and human had never happened before. Yet there was something very Senexi-like in the method, as if branch inds attached to the brood mind were to brush mentalities while searching in the ageless memories.

The dread subsided. There was little worse that could happen to him, with his fellows dead, his brood mind in flux bind, his purpose uncertain.

What Aryz was feeling, for the first time, was a small measure of *freedom.*

The story of the original Prufrax continued.

In the early stages she visited Clevo with a barely concealed anger. His method was aggravating, his goals never precisely spelled out. What did he want with her, if anything?

And she with him? Their meetings were clandestine, though not precisely forbidden. She was a hawk one now with considerable personal liberty between exercises and engagements. There were no monitors in the closed-off reaches of the cruiser, and they could do whatever they wished. The two met in areas close to the ship's hull, usually in weapons blisters that could be opened to reveal the stars; there they talked.

Prufrax was not accustomed to prolonged conversation. Hawks were neither raised to be voluble, nor selected for their curiosity. Yet the exhawk Clevo talked a great deal and was the most



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curious person she had met, herself included, and she regarded herself as uncharacteristically curious.

Often he was infuriating, especially when he played the "leading game," as she called it. Leading her from one question to the next, like an instructor, but without the trappings or any clarity of purpose. "What do you think of your mother?"

"Does that matter?"

"Not to me."

"Then why ask?"

"Because you matter."

Prufrax shrugged. "She was a fine mother. She bore me with a well-chosen heritage. She raised me as a hawk candidate. She told me her stories."

"Any hawk I know would envy you for listening at Jay-ax's knee."

"I was hardly at her knee."

"A speech tactic."

"Yes, well, she was important to me."

"She was a preferred single?"

"Yes."

"So you have no father."

"She selected without reference to individuals."

"Then you are really not that much different from a Senexi."

She bristled and started to push away. "There! You insult me again."

"Not at all. I've been asking one question all this time, and you haven't even heard. How well do you know the enemy?"

"Well enough to destroy them." She couldn't believe that was the only question he'd been asking. His speech tactics were very odd.

"Yes, to win battles, perhaps. But who will win the war?"

"It'll be a long war," she said softly, floating a few meters from him. He rotated in the blister, blocking out a blurred string of stars. The cruiser was preparing to shift out of status geometry again. "They fight well."

"They fight with conviction. Do you believe them to be evil?"

"They destroy us."

"We destroy them."

"So the question," she said, smiling at her cleverness, "is who began to destroy?"

"Not at all," Clevo said. "I suspect there's no longer a clear answer to that. We are the new, they are the old. The old must be superseded.



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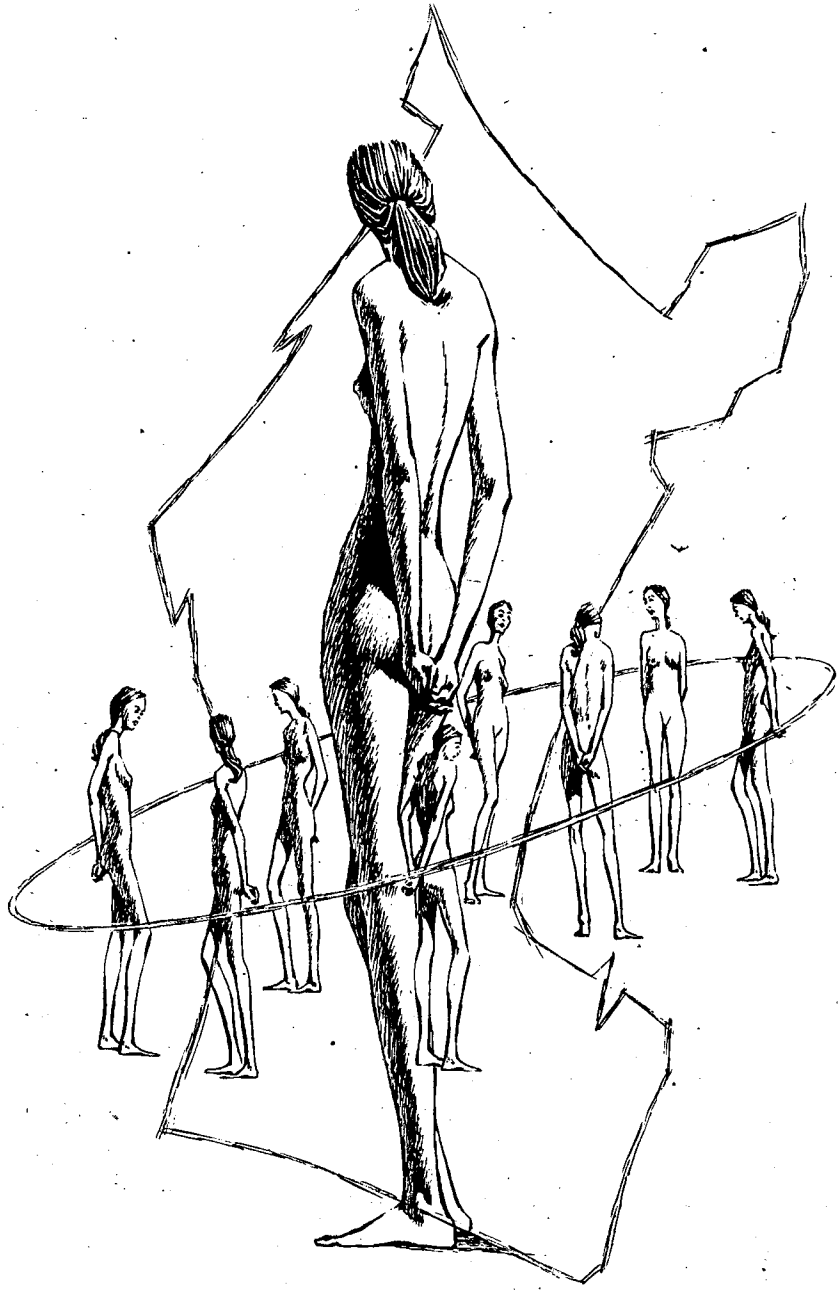

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"That's the only way we're different? They're old, we're not so old? I don't understand."

"Nor do I, entirely."

"Well, finally!"

"The Senexi," Clevo continued, unperturbed, "long ago needed only gas-giant planets like their homeworlds. They lived in peace for billions of years before our world was formed. But as they moved from star to star, they learned uses for other types of worlds. We were most interested in rocky Earth-like planets. Gradually we found uses for gas giants, too. By the time we met, each of us encroached on the other's territory. Their technology is so improbable, so unlike ours, that when we first encountered them we thought they must come from another geometry."

"Where did you learn all this?" Prufrax squinted at him suspiciously.

"I'm no longer a hawk," he said, "but I was too valuable just to discard. My experience was too broad, my abilities too useful. So I was placed in research. It seems a safe place for me. Little contact with my comrades." He looked directly at her. "We must try to know our enemy, at least a little."

"That's dangerous," Prufrax said, almost instinctively.

"Yes, it is. What you know, you cannot hate."

"We must hate," she said. "It makes us strong. Senexi hate."

"They might," he said. "But, sometime, wouldn't you like to . . . sit down and talk with one, after a battle? Talk with a fighter? Learn its tactic, how it bested you in one move, compare—"

"No!" Prufrax shoved off rapidly down the tube. "We're shifting now. We have to get ready."

—She's smart. She's leaving him. He's crazy.

—Why do you think that?

—He would stop the fight, end the Zap.

—But he was a hawk.

—And hawks became glovers, I guess. But glovers go wrong, too. Like you.

—?

—Did you know they used you? How you were used?

—That's all blurred now.

—She's doomed if she stays around him. Who's that?

—Someone is listening with us.

The next battle was bad enough to fall into the hellfought. Prufrax was in her fightsuit, legs drawn up as if about to kick



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off. The cruiser exited sponge space and plunged into combat before sponge space supplements could reach full effectiveness. She was dizzy, disoriented. The overhawks could only hope that a switch from biologic to cyber would cure the problem.

She didn't know what they were attacking. Tactic was flooding the implant, but she was only receiving the wash of that; she hadn't merged yet. She sensed that things were confused. That bothered her. Overs did not feel confusion.

The cruiser was taking damage. She could sense at least that, and she wanted to scream in frustration. Then she was ordered to merge with the implant. Biologic became cyber. She was in the Know.

The cruiser had reintegrated above a gas-giant planet. They were seventy-nine thousand kilometers from the upper atmosphere. The damage had come from ice mines—chunks of Senexi-treated water ice, altered to stay in sponge space until a human vessel integrated near by. Then they emerged, packed with momentum and all the residual instability of an unsuccessful return to status geometry. Unsuccessful for a ship, that is—very successful for a weapon.

The ice mines had given up the overness of the real within range of the cruiser and had blasted out whole sections of the hull. The launch lanes had not been damaged. The fighters lined up on their beams and were peppered out into space, spreading in the famous sword flower.

The planet was a cold nest. Over didn't know what the atmosphere contained, but Senexi activity had been high in the star system, concentrating on this world. Over had decided to take a chance. Fighters headed for the atmosphere. The cruiser began planting singularity eggs. The eggs went ahead of the fighters, great black grainy ovoids that seemed to leave a trail of shadow—the wake of a birthing disruption in status geometry that could turn a gas giant into a short-lived sun.

Their time was limited. The fighters would group on entry sleds and descend to the liquid water regions where Senexi commonly kept their upwelling power plants. The fighters would first destroy any plants, loop into the liquid ammonia regions to search for hidden cuckoos, then see what was so important about the world.

She and five other fighters mounted the sled. Growing closer, the hazy clear regions of the atmosphere sparkled with Senexi sensors. Spiderweb beams shot from the six sleds to down the sensors. Buffet began. Scream, heat, then a second flower from



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the sled at a depth of two hundred kilometers. The sled slowed and held station. It would be their only way back. The fightsuits couldn't pull out of such a large gravity well.

She descended deeper. The pale, bloated beacon of the red star was dropping below the second cloudtops, limning the strata in orange and purple. At the liquid ammonia level she was instructed to key in permanent memory of all she was seeing. She wasn't "seeing" much, but other sensors were recording a great deal, all of it duly processed in her implant. "There's life here," she told herself. Indigenous life. Just another example of Senexi disregard for basic decency: they were interfering with a world developing its own complex biology.

The temperature rose to ammonia vapor levels, then to liquid water. The pressure on the fightsuit was enormous, and she was draining her stores much more rapidly than expected. At this level the atmosphere was particularly thick with organics.

Senexi snakes rose from below, passed them in altitude, then doubled back to engage. Prufrax was designated the deep diver; the others from her sled would stay at this level in her defense. As she fell, another sled group moved in behind her to double the cover.

She searched for the characteristic radiation curve of an upwelling plant. At the lower boundary of the liquid water level, below which her suit could not safely descend, she found it.

The Senexi were tapping the gas giant's convection from greater depths than usual. Above the plant, almost indetectable, was another object with an uncharacteristic curve. They were separated by ten kilometers. The power plant was feeding its higher companion with tight energy beams.

She slowed. Two other fighters, disengaged from the brief skirmish above, took positions as backups a few dozen kilometers higher than she. Her implant searched for an appropriate tactic. She would avoid the zero-angle phase for the moment, go in for reconnaissance. She could feel sound pouring from the plant and its companion—rhythmic, not waste noise, but deliberate. And homing in on that sound were waves of large vermiform organisms, like chains of gas-filled sausage. They were dozens of meters long, two meters at their greatest thickness, shaped vaguely like the Senexi snake fighters. The vermiforms were native, and they were being lured into the uppermost floating structure. None were emerging. Her backups spread apart, descended, and drew up along her flanks.

She made her decision almost immediately. She could see a



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pattern in the approach of the natives. If she fell into the pattern, she might be able to enter the structure unnoticed.

—It's a grinder. She doesn't recognize it.

—What's a grinder?

—She should make the Zap! It's an ugly thing; Senexi use them all the time. Net a planet with grinders, like a cuckoo, but for larger operations.

The creatures were being passed through separator fields. Their organics fell from the bottom of the construct, raw material for new growth—Senexi growth. Their heavier elements were stored for later harvest.

With Prufrax in their midst, the vermiforms flew into the separator. The interior was hundreds of meters wide, lead-white walls with flat gray machinery floating in a dust haze, full of hollow noise, the distant bleats of vermiforms being slaughtered. Prufrax tried to retreat, but she was caught in a selector field. Her suit bucked and she was whirled violently, then thrown into a repository for examination. She had been screened from the separator; her plan to record, then destroy, the structure had been foiled by an automatic filter.

"Information sufficient." Command logic programmed into the implant before launch was now taking over. "Zero-angle phase both plant and adjunct." She was drifting in the repository, still slightly stunned. Something was fading. Cyber was hissing in and out; the over logic-commands were being scrambled. Her implant was malfunctioning and was returning control to biologic. The selector fields had played havoc with all cyber functions, down to the processors in her weapons.

Cautiously she examined the down systems one by one, determining what she could and could not do. This took as much as thirty seconds—an astronomical time on the implant's scale.

She still could use the phase weapon. If she was judicious and didn't waste her power, she could cut her way out of the repository, maneuver and work with her escorts to destroy both the plant and the separator. By the time they returned to the sleds, her implant might have rerouted itself and made sufficient repairs to handle defense. She had no way of knowing what was waiting for her if—when—she escaped, but that was the least of her concerns for the moment.

She tightened the setting of the phase beam and swung her fightsuit around, knocking a cluster of junk ice and silty phosphorescent dust. She activated the beam. When she had a hole large enough to pass through, she edged the suit forward, beamed



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through more walls and obstacles, and kicked herself out of the repository into free fall. She swiveled and laid down a pattern of wide-angle beams, at the same time relaying a message on her situation to the escorts.

The escorts were not in sight. The separator was beginning to break up, spraying debris through the almost opaque atmosphere. The rhythmic sound ceased, and the crowds of vermiforms began to disperse.

She stopped her fall and thrust herself several kilometers higher—directly ito a formation of Senexi snakes. She had barely enough power to reach the sled, much less fight and turn her beams on the upwelling plant.

Her cyber was still down.

The sled signal was weak. She had no time to calculate its direction from the inertial guidance cyber. Besides, all cyber was unreliable after passing through the separator.

*Why do they fight so well?* Clevo's question clogged her thoughts. Cursing, she tried to blank and keep all her faculties available for running the fightsuit. *When evenly matched, you cannot win against your enemy unless you understand them. And if you truly understand, why are you fighting and not talking?* Clevo had never told her that—not in so many words. But it was part of a string of logic all her own.

*Be more than an automaton with a narrow range of choices. Never underestimate the enemy.* Those were old Grounds dicta, not entirely lost in the new training, but only emphasized by Clevo.

*If they fight as well as you, perhaps in some ways they fight-think like you do. Use that.*

Isolated, with her power draining rapidly, she had no choice. They might disregard her if she posed no danger. She cut her thrust and went into a diving spin. Clearly she was on her way to a high-pressure grave. They would sense her power levels, perhaps even pick up the lack of field activity if she let her shields drop. She dropped the shields. If they let her fall and didn't try to complete the kill—if they concentrated on active fighters above—she had enough power to drop into the water vapor regions, far below the plant, and silently ride a thermal into range. With luck, she could get close enough to lay a web of zero-angle phase and take out the plant.

She had minutes in which to agonize over her plan. Falling, buffeted by winds that could knock her kilometers out of range, she spun like a vagrant flake of snow.



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She couldn't even expend the energy to learn if they were scanning her, checking out her potential.

Perhaps she underestimated them. Perhaps they would be that much more thorough and take her out just to be sure. Perhaps they had unwritten rules of conduct like the ones she was using, taking hunches into account. Hunches were discouraged in Grounds training—much less reliable than cyber.

She fell. Temperature increased. Pressure on her suit began to constrict her air supply. She used fighter trancing to cut back on her breathing.

Fell.

And broke the trance. Pushed through the dense smoke of exhaustion. Planned the beam web. Counted her reserves. Nudged into an updraft beneath the plant. The thermal carried her, a silent piece of paper in a storm, drifting back and forth beneath the objective. The huge field intakes pulsed above, lightning outlining their invisible extension. She held back on the beam.

Nearly faded out. Her suit interior was almost unbearably hot.

She was only vaguely aware of laying down the pattern. The beams vanished in the murk. The thermal pushed her through a layer of haze, and she saw the plant, riding high above clear-atmosphere turbulence. The zero-angle phase had pushed through the field intakes, into their source nodes and the plant body, surrounding it with bright blue Tcherenkov. First the surface began to break up, then the middle layers, and finally key supports. Chunks vibrated away with the internal fury of their molecular, then atomic, then particle disruption. Paraphrasing Grounds description of beam action, the plant became less and less convinced of its reality. "Matter dreams," an instructor had said a decade before. "Dreams it is real, maintains the dream by shifting rules with constant results. Disturb the dreams, the shifting of the rules results in inconstant results. Things cannot hold."

She slid away from the updraft, found another, wondered idly how far she would be lifted. Curiosity at the last. Let's just see, she told herself; a final experiment.

Now she was cold. The implant was flickering, showing signs of reorganization. She didn't use it. No sense expanding the amount of time until death. No sense at all.

The sled, maneuvered by one remaining fighter, glided up beneath her almost unnoticed.

Aryz waited in the stillness of a Senexi memory, his thinking



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temporarily reduced to a faint susurrus. What he waited for was not clear.

—Come.

The form of address was wrong, but he recognized the voice. His thoughts stirred, and he followed the nebulous presence out of Senexi territory.

—Know your enemy.

Prufrax . . . the name of one of the human shapes sent out against their own kind. He could sense her presence in the mandate, locked into a memory store. He touched on the store and caught the essentials—the grinder, the updraft plant, the fight from Prufrax's viewpoint.

—Know how your enemy knows you.

He sensed a second presence, similar to that of Prufrax. It took him some time to realize that the human captive was another form of the shape, a reproduction of the . . .

Both were reproductions of the female whose image was in the memory store. Aryz was not impressed by threes—Senexi mysticism, what had ever existed of it, had been preoccupied with fives and sixes—but the coincidence was striking.

—Know how your enemy sees you.

He saw the grinder processing organics—the vermiform natives—in preparation for a widespread seeding of deuterium gatherers. The operation had evidently been conducted for some time; the vermiform populations were greatly reduced from their usual numbers. Vermiforms were a common type-species on gas giants of the sort depicted. The mutated shape nudged him into a particular channel of the memory, that which carried the original Prufrax's emotions. She had reacted with *disgust* to the Senexi procedure. It was a reaction not unlike what Aryz might feel when coming across something forbidden in Senexi behavior. Yet eradication was perfectly natural, analogous to the human cleansing of *food* before *eating*.

—It's in the memory. The vermiforms are intelligent. They have their own kind of civilization. Human action on this world prevented their complete extinction by the Senexi.

—So what matter they were *intelligent?* Aryz responded. They did not behave or think like Senexi, or like any species Senexi find compatible. They were therefore not desirable. Like humans.

—You would make humans extinct?

—We would protect ourselves from them.

—Who damages the other most?

Aryz didn't respond. The line of questioning was incomprehen-



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sible. Instead he flowed into the memory of Prufrax, propelled by another aspect of complete freedom, confusion.

The implant was replaced. Prufrax's damaged limbs and skin were repaired or regenerated quickly, and within four wakes, under intense treatment usually reserved only for overs, she regained all her reflexes and speed. She requested liberty of the cruiser while it returned for repairs. Her request was granted.

She first sought Clevo in the designated research area. He wasn't there, but a message was, passed on to her by a smiling young crew member. She read it quickly:

"You're free and out of action. Study for a while, then come find me. The old place hasn't been damaged. It's less private, but still good. Study! I've marked highlights."

She frowned at the message, then handed it to the crew member, who duly erased it and returned to his duties. She wanted to talk with Clevo, not study.

But she followed his instructions. She searched out highlighted entries in the ship's memory store. It was not nearly as dull as she had expected. In fact, by following the highlights, she felt she was learning more about Clevo and about the questions he asked.

Old literature was not nearly as graphic as fibs, but it was different enough to involve her for a time. She tried to create imitations of what she read, but erased them. Nonfib stories were harder than she suspected. She read about punishment, duty; she read about places called heaven and hell, from a writer who had died tens of thousands of years before. With ed supplement guidance, she was able to comprehend most of what she read. Plugging the store into her implant, she was able to absorb hundreds of volumes in an hour.

Some of the stores were losing definition. They hadn't been used in decades, perhaps centuries.

Halfway through, she grew impatient. She left the research area. Operating on another hunch, she didn't go to the blister as directed, but straight to memory central, two decks inboard the research area. She saw Clevo there, plugged into a data pillar, deep in some aspect of ship history. He noticed her approach, unplugged, and swiveled on his chair. "Congratulations," he said, smiling at her.

"Hardfought," she acknowledged, smiling.

"Better than that, perhaps," he said.

She looked at him quizzically. "What do you mean, better?"

"I've been doing some illicit tapping on over channels."



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"So?"

—He *is dangerous!*

"For what?"

"You may have a valuable genetic assortment. Overs think you behaved remarkably well under impossible conditions."

"Did I?"

He nodded. "Your type may be preserved."

"Which means?"

"There's a program being planned. They want to take the best fighters and reproduce them—clone them—to make uniform top-grade squadrons. It was rumored in my time—you haven't heard?"

She shook her head.

"It's not new. It's been done, off and on, for tens of thousands of years. This time they believe they can make it work."

"You were a fighter, once," she said. "Did they preserve your type?"

Clevo nodded. "I had something that interested them, but not, I think, as a fighter."

Prufrax looked down at her stubby-fingered hands. "It was grim," she said. "You know what we found?"

"An extermination plant."

"You want me to understand them better. Well, I can't. I refuse. How could they do such things?" She looked disgusted and answered her own question. "Because they're Senexi."

"Humans," Clevo said, "have done much the same, sometimes worse."

"No!"

—No!

"Yes," he said firmly. He sighed. "We've wiped Senexi worlds, and we've even wiped worlds with intelligent species like our own. Nobody is innocent. Not in this universe."

"We were never taught that."

"It wouldn't have made you a better hawk. But it might make a better human of you to know. Greater depth of character. Do you want to be more aware?"

"You mean, study more?"

He nodded.

"What makes you think *you* can teach me?"

"Because you thought about what I asked you. About how Senexi thought. And you survived where some other hawk might not have. The overs think it's in your genes. It might be. But it's also in your head."

"Why not tell the overs?"



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"I have," he said. He shrugged.

"They wouldn't want me to learn from you?"

"I don't know," Clevo said. "I suppose they're aware you're talking to me. They could stop it if they wanted."

"And if I learn from you?"

"Not from me, actually. From the past. From history, what other people have thought. I'm really not any more capable than you . . . but I know history, small portions of it. I won't teach you so much as guide."

"I did use your questions," Prufrax said. "But will I ever need to use them—think that way—again?"

Clevo nodded. "Of course."

—You're quiet.

—She's giving in to him.

—She gave in a long time ago.

—She should be afraid.

—Were you—we—ever really afraid of a challenge?

—No.

—Not Senexi, not forbidden knowledge.

Clevo first led her through the history of past wars, judging that was appropriate considering her occupation. She was attentive enough, though her mind wandered; sometimes he was didactic, but she found she didn't mind that much.

She saw that in all wars, the first stage was to dehumanize the enemy, reduce the enemy to a lower level so that he might be killed without compunction. When the enemy was not human to begin with, the task was easier. As wars progressed, this tactic frequently led to an underestimation of the enemy, with disastrous consequences. "We aren't exactly underestimating the Senexi," Clevo said. "The overs are too smart for that. But we refuse to understand them, and that could make the war last indefinitely."

"Then why don't the overs see that?"

"Because we're being locked into a pattern. We've been fighting for so long, we've begun to lose ourselves. And it's getting worse." He assumed his didactic tone, and she knew he was reciting something he'd formulated years before and repeated to himself a thousand times. "There is no war so important that, to win it, we must destroy our minds."

She didn't agree with that; losing the war with the Senexi would mean extinction, as she understood things.

Most often they met in the single unused weapons blister that had not been damaged. They met when the ship was basking in



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the real between sponge-space jaunts. He brought memory stores with him in portable modules, and they read, listened, experienced together. She never placed a great deal of importance in the things she learned; her interest was focused on Clevo. Still, she learned.

The rest of her time she spent training. She was aware of a growing isolation from the hawks, which she attributed to her uncertain rank status. Was her genotype going to be preserved or not? The decision hadn't been made. The more she learned, the less she wanted to be singled out for honor. Attracting that sort of attention might be dangerous, she thought. Dangerous to whom, or what, she could not say.

Clevo showed her how hero images had been used to indoctrinate birds and hawks in a standard of behavior that was ideal, not realistic. The results were not always good; some tragic blunders had been made by fighters trying to be more than anyone possibly could or refusing to be flexible.

The war was certainly not a fib. Yet more and more the overs seemed to be treating it as one. Unable to bring about strategic victories against the Senexi, the overs had settled in for a long war of attrition and were apparently bent on adapting all human societies to the effort.

"There are overs we never hear of, who make decisions that shape our entire lives. Soon they'll determine whether or not we're even born, if they don't already."

"That sounds paranoid," she said, trying out a new word and concept she had only recently learned.

"Maybe so."

"Besides, it's been like that for ages—not knowing all our overs."

"But it's getting worse," Clevo said. He showed her the projections he had made. In time, if trends continued unchanged, fighters and all other combatants would be treated more and more mechanically, until they became the machines the overs wished them to be.

—No.

—Quiet. How does he feel toward her?

It was inevitable that as she learned under his tutelage, he began to feel responsible for her changes. She was an excellent fighter. He could never be sure that what he was doing might reduce her effectiveness. And yet he had fought well—despite similar changes—until his billet switch. It had been the overs



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who had decided he would be more effective, less disruptive, elsewhere.

Bitterness over that decision was part of his motive. The overs had done a foolish thing, putting a fighter into research. Fighters were tenacious. If the truth was to be hidden, then fighters were the ones likely to ferret it out. And pass it on. There was a code among fighters, seldom revealed to their immediate overs, much less to the supreme overs parsecs distant in their strategospheres. What one fighter learned that could be of help to another had to be passed on, even under penalty. Clevo was simply following that unwritten rule.

Passing on the fact that, at one time, things had been different. That war changed people, governments, societies, and that societies could effect an enormous change on their constituents, especially now—change in their lives, their thinking. Things could become even more structured. Freedom of fight was a drug, an illusion—

—No!

used to perpetuate a state of hatred.

"Then why do they keep all the data in stores?" she asked. "I mean, you study the data, everything becomes obvious."

"There are still important people who think we may want to find our way back someday. They're afraid we'll lose our roots, but—" His face suddenly became peaceful. She reached out to touch him, and he jerked slightly, turning toward her in the blister. "What is it?" she asked.

"It's not organized. We're going to lose the information. Ship overs are going to restrict access more and more. Eventually it'll decay, like some already has in these stores. I've been planning for some time to put it all in a single unit—"

—*He* built the mandate!

"and have the overs place one on every ship, with researchers to tend it. Formalize the loose scheme still in effect, but dying. Right now I'm working on the fringes. At least I'm allowed to work. But soon I'll have enough evidence that they won't be able to argue. Evidence of what happens to societies that try to obscure their histories. They go quite mad. The overs are still rational enough to listen; maybe I'll push it through." He looked out the transparent blister. The stars were smudging to one side as the cruiser began probing for entrances to sponge space. "We'd better get back."

"Where are you going to be when we return? We'll all be transferred."



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"That's some time removed. Why do you want to know?"

"I'd like to learn more."

He smiled. "That's not your only reason."

"I don't need someone to tell me what my reasons are," she said testily.

"We're so reluctant," he said. She looked at him sharply, irritated and puzzled. "I mean," he continued, "we're hawks. Comrades. Hawks couple like *that*." He snapped his fingers. "But you and I sneak around it all the time."

Prufrax kept her face blank.

"Aren't you receptive toward me?" he asked, his tone almost teasing.

"It's just that that's not all," she said, her tone softening.

"Indeed," he said in a barely audible whisper.

In the distance they heard the alarms.

—It was never any different.

—What?

—Things were never any different before me.

—Don't be silly. It's all here.

—If Clevo made the mandate, then he put it here. It isn't true.

—Why are you upset?

—I don't like hearing that everything I believe is a . . . fib.

—I've never known the difference, I suppose. Eyes-open was never all that real to me. This isn't real, you aren't . . . this is eyes-shut. So why be upset? You and I . . . we aren't even whole people. I feel you. You wish the Zap, you fight, not much else. I'm just a shadow, even compared to you. But she is whole. She loves him. She's less a victim than either of us. So something has to have changed.

—You're saying things have gotten worse.

—If the mandate is a lie, that's all I am. You refuse to accept. I *have* to accept, or I'm even less than a shadow.

—I don't refuse to accept. It's just hard.

—You started it. You thought about love.

—You did!

—Do you know what love is?

—Reception.

They first made love in the weapons blister. It came as no surprise; if anything, they approached it so cautiously they were clumsy. She had become more and more receptive, and he had dropped his guard. It had been quick, almost frantic, far from the orchestrated and drawn-out ballet the hawks prided themselves for. There was no pretense. No need to play the roles of artists



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interacting. They were depending on each other. The pleasure they exchanged was nothing compared to the emotions involved.

"We're not very good with each other," Prufrax said.

Clevo shrugged. "That's because we're shy."

"Shy?"

He explained. In the past—at various times in the past, because such differences had come and gone many times—making love had been more than a physical exchange or even an expression of comradeship. It had been the acknowledgment of a bond between people.

She listened, half-believing. Like everything else she had heard, that kind of love seemed strange, distasteful. What if one hawk was lost, and the other continued to love? It interfered with the hardfought, certainly. But she was also fascinated. Shyness—the fear of one's presentation to another. The hesitation to present truth, or the inward confusion of truth at the awareness that another might be important, more important than one thought possible.

Complex emotion was not encouraged either at the Grounds or among hawks on station. Complex emotion degraded complex performance. The simple and direct was desirable.

"But all we seem to do is talk—until now," Prufrax said, holding his hand and examining his fingers one by one. They were very little different from her own, though extended a bit from hawk fingers to give greater versatility with key instruction.

"Talking is the most human thing we can do."

She laughed. "I know what you are," she said, moving up until her eyes were even with his chest. "You're an instructor at heart. You make love by telling." She felt peculiar, almost afraid, and looked up at his face. "Not that I don't enjoy your lovemaking, like this. Physical."

"You receive well," he said. "Both ways."

"What we're saying," she whispered, "is not truth-speaking. It's amenity." She turned into the stroke of his hand through her hair. "Amenity is supposed to be decadent. That fellow who wrote about heaven and hell. He would call it a sin."

"Amenity is the recognition that somebody may see or feel differently than you do. It's the recognition of individuals. You and I, we're part of the end of all that."

"Even if you convince the overs?"

He nodded. "They want to repeat success without risk. New individuals are risky, so they duplicate past success. There will be more and more people, fewer individuals. More of you and me,



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less of others. The fewer individuals, the fewer stories to tell. The less history. We're part of the death of history."

She floated next to him, trying to blank her mind as she had done before, to drive out the nagging awareness that he was right. She thought she understood the social structure around her. Things seemed new. She said as much.

"It's a path we're taking," Clevo said. "Not a place we're at."

—It's a place *we're* at. How different are *we*?

—But there's so much history in here. How can it be over for us?

—I've been thinking. Do we know the last event recorded in the mandate?

—Don't, we're drifting from Prufrax now. . . .

Aryz felt himself drifting with them. They swept over countless millennia, then swept back the other way. And it became evident that as much change had been wrapped in one year of the distant past as in a thousand years of the closing entries in the mandate. Clevo's voice seemed to follow them, though they were far from his period, far from Prufrax's record.

"Tyranny is the death of history. We fought the Senexi until we became like them. No change, youth at an end, old age coming upon us. There is no important change, merely elaborations in the pattern."

—How many times have we been here, then? How many times have we died?

Aryz wasn't sure, now. *Was* this the first time humans had been captured? Had he been told everything by the brood mind? Did the Senexi have no *history*, whatever that was—

**The accumulated lives of living, thinking beings. Their actions, thoughts, passions, hopes.**

The mandate answered even his confused, nonhuman requests. He could understand action, thought, but not passion or hope. Perhaps without those there was no *history*.

—You have no history, the mutated shape told him. There have been millions like you, even millions like the brood mind. What is the last event recorded in the brood mind that is not duplicated a thousand times over, so close they can be melded together for convenience?

—How do you understand that—because we made you between human and Senexi?

—Not only that.

The requests of the twin captives and shape were moving them



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back once more into the past, through the dim gray millennia of repeating ages. History began to manifest again, differences in the record.

On the way back to Mercior, four skirmishes were fought. Prufrax did well in each. She carried something special with her, a thought she didn't even tell Clevo, and she carried the same thought with her through their last days at the Grounds.

Taking advantage of hawk liberty, she opted for a posthard-fought residence just outside the Grounds, in the relatively uncrowded Daughter of Cities zone. She wouldn't be returning to fight until several issues had been decided—her status most important among them.

Clevo began making his appeal to the middle overs. He was given Grounds duty to finish his proposals. They could stay together for the time being.

The residence was sixteen square meters in area, not elegant—*natural,* as rentOpts described it.

On the last day she lay in the crook of Clevo's arm. They had done a few hours of nature sleep. He hadn't come out yet, and she looked up at his face, reached up with a hand to feel his arm.

It was different from the arms of others she had been receptive toward. It was unique. The thought amused her. There had never been a reception like theirs. This was the beginning. And if both were to be duplicated, this love, this reception, would be repeated an infinite number of times. Clevo meeting Prufrax, teaching her, opening her eyes.

Somehow, even though repetition contributed to the death of history, she was pleased. This was the secret thought she carried into fight. Each time she would survive, wherever she was, however many duplications down the line. She would receive Clevo, and he would teach her. If not now—if one or the other died—then in the future. The death of history might be a good thing. Love could go on forever.

She had lost even a rudimentary apprehension of death, even with present pleasure to live for. Her functions had sharpened. She would please him by doing all the things he could not. And if he was to enter that state she frequently found him in, that state of introspection, of reliving his own battles and of envying her activity, then that wasn't bad. All they did to each other was good.

—*Was* good

—*Was*



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She slipped from his arm and left the narrow sleeping quarter, pushing through the smoke-colored air curtain to the lounge. Two hawks and an over she had never seen before were sitting there. They looked up at her.

"Under," Prufrax said.

"Over," the woman returned. She was dressed in tan and green, Grounds colors, not ship.

"May I assist?"

"Yes."

"My duty, then?"

The over beckoned her closer. "You have been receiving a researcher."

"Yes," Prufrax said. The meetings could not have been a secret on the ship, and certainly not their quartering near the Grounds. "Has that been against duty?"

"No." The over eyed Prufrax sharply, observing her perfected fightform, the easy grace with which she stood, naked, in the middle of the small compartment. "But a decision has been reached. Your status is decided now."

She felt a shiver.

"Prufrax," said the elder hawk. She recognized him from fibs, and his companion: Kumnax and Arol. Once her heroes. "You have been accorded an honor, just as your partner has. You have a valuable genetic assortment—"

She barely heard the rest. They told her she would return to fight, until they deemed she had had enough experience and background to be brought into the polinstruc division. Then her fighting would be over. She would serve better as an example, a hero.

Heroes never partnered out of function. Hawk heroes could not even partner with exhawks.

Clevo emerged from the air curtain. "Duty," the over said. "The residence is disbanded. Both of you will have separate quarters, separate duties."

They left. Prufrax held out her hand, but Clevo didn't take it. "No use," he said.

Suddenly she was filled with anger. "You'll give it up? Did I expect too much? *How strongly?*"

"Perhaps even more strongly than you," he said. "I knew the order was coming down. And still I didn't leave. That may hurt my chances with the supreme overs."

"Then at least I'm worth more than your breeding history?"

"Now you are history. History the way they make it."



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"I feel like I'm dying," she said, amazement in her voice. "What is that, Clevo? What did you do to me?"

"I'm in pain, too," he said.

"You're hurt?"

"I'm confused."

"I don't believe that," she said, her anger rising again. "You knew, and you didn't do anything?"

"That would have been counter to duty. We'll be worse off if we fight it."

"So what good is your great, exalted history?"

"History is what you have," Clevo said. "I only record."

—Why did they separate them?

—I don't know. You didn't like him, anyway.

—Yes, but now . . .

—I don't understand.

—We don't. Look what happens to her. They took what was best out of her. Prufrax

**went into battle eighteen more times before dying as heroes often do, dying in the midst of what she did best. The question of what made her better before the separation—for she definitely was not as fine a fighter after—has not been settled. Answers fall into an extinct classification of knowledge, and there are few left to interpret, none accessible to this device.**

—So she went out and fought and died. They never even made fibs about her. This killed her?

—I don't think so. She fought well enough. She died like other hawks died.

—And she might have lived otherwise.

—How can I know that, any more than you?

—They—we—met again, you know. I met a Clevo once, on my ship. They didn't let me stay with him long.

—How did you react to him?

—There was so little time, I don't know.

—Let's ask. . . .

**In thousands of duty stations, it was inevitable that some of Prufrax's visions would come true, that they should meet now and then. Clevos were numerous, as were Prufraxes. Every ship carried complements of several of each. Though Prufrax was never quite as successful as the original, she was a fine type. She—**

—She was never quite as successful. They took away her edge. They didn't even know it!



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—They must have known.

—Then they didn't want to win!

—We don't know that. Maybe there were more important considerations.

—Yes, like killing history.

Aryz shuddered in his warming body, dizzy as if about to bud, then regained control. He had been pulled from the mandate, called to his own duty.

He examined the shapes and the human captive. There was something different about them. How long had they been immersed in the mandate? He checked quickly, frantically, before answering the call. The reconstructed Mam had malfunctioned. None of them had been nourished. They were thin, pale, cooling.

Even the bloated mutant shape was dying; lost, like the others, in the mandate.

He turned his attention away. Everything was confusion. Was he human or Senexi now? Had he fallen so low as to understand them? He went to the origin of the call, the ruins of the temporary brood chamber. The corridors were caked with ammonia ice, burning his pod as he slipped over them. The brood mind had come out of flux bind. The emergency support systems hadn't worked well; the brood mind was damaged.

"Where have you been?" it asked.

"I assumed I would not be needed until your return from the flux bind."

"You have not been watching!"

"Was there any need? We are so advanced in time, all our actions are obsolete. The nebula is collapsed, the issue is decided."

"We do not know that. We are being pursued."

Aryz turned to the sensor wall—what was left of it—and saw that they were, indeed, being pursued. He had been lax.

"It is not your fault," the brood mind said. "You have been set a task that tainted you and ruined your function. You will dissipate."

Aryz hesitated. He had become so different, so tainted, that he actually *hesitated* at a direct command from the brood mind. But it was damaged. Without him, without what he had learned, what could it do? It wasn't reasoning correctly.

"There are facts you must know, important facts—"

Aryz felt a wave of revulsion, uncomprehending fear, and something not unlike human anger radiate from the brood mind. What-



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ever he had learned and however he had changed, he could not withstand that wave.

Willingly, and yet against his will—it didn't matter—he felt himself liquefying. His pod slumped beneath him, and he fell over, landing on a pool of frozen ammonia. It burned, but he did not attempt to lift himself. Before he ended, he saw with surprising clarity what it was to be a branch ind, or a brood mind, or a human. Such a valuable insight, and it leaked out of his permea and froze on the ammonia.

The brood mind regained what control it could of the fragment. But there were no defenses worthy of the name. Calm, preparing for its own dissipation, it waited for the pursuit to conclude.

The Mam set off an alarm. The interface with the mandate was severed. Weak, barely able to crawl, the humans looked at each other in horror and slid to opposite corners of the chamber.

They were confused: which of them was the captive, which the decoy shape? It didn't seem important. They were both bone-thin, filthy with their own excrement. They turned with one motion to stare at the bloated mutant. It sat in its corner, tiny head incongruous on the huge thorax, tiny arms and legs barely functional even when healthy. It smiled wanly at them.

"We felt you," one of the Prufraxes said. "You were with us in there." Her voice was a soft croak.

"That was my place," it replied. "My only place."

"What function, what name?"

"I'm . . . I know that. I'm a researcher. In there, I knew myself in there."

They squinted at the shape. The head. Something familiar, even now. "You're a Clevo . . ."

There was noise all around them, cutting off the shape's weak words. As they watched, their chamber was sectioned like an orange, and the wedges peeled open. The illumination ceased. Cold enveloped them.

A naked human female, surrounded by tiny versions of herself, like an angel circled by fairy kin, floated into the chamber. She was thin as a snake. She wore nothing but silver rings on her wrists and a thin torque around her waist. She glowed blue-green in the dark.

The two Prufraxes moved their lips weakly but made no sound in the near vacuum. *Who are you?*

She surveyed them without expression, then held out her arms as if to fly. She wore no gloves, but she was of their type.



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As she had done countless times before on finding such Senexi experiments—though this seemed older than most—she lifted one arm higher. The blue-green intensified, spread in waves to the mangled walls, surrounded the freezing, dying shapes. Perfect, angelic, she left the debris behind to cast its fitful glow and fade.

They destroyed every portion of the fragment but one. They left the mandate behind unharmed.

Then they continued, millions of them thick like mist, working the spaces between the stars, their only master the overness of the real.

They needed no other masters. They would never malfunction.

The mandate drifted in the dark and cold, its memory going on, but its only life the rapidly fading tracks where minds had once passed through it. The trails writhed briefly, almost as if alive, but only following the quantum rules of diminished energy states. Briefly, a small memory was illuminated.

**Prufrax's last poem,** explained the mandate reflexively.

*How the fires grow! Peace passes*
*All memory lost.*
*Somehow we always miss that single door,*
*Dooming ourselves to circle.*

*Ashes to stars, lies to souls,*
*Let's spin 'round the sinks and holes.*

*Kill the good, eat the young.*
*Forever and more*
*You and I are never done.*

The track faded into nothing. Around the mandate, the universe grew old very quickly. ●

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# LETTERS

Dear Editor,

I have been a steady reader of *IAsfm* and your sister magazine *Analog* for the last four years, and I enjoy both. They remind me of sisters who have the same beginning and finally grow into two separate entities. Their mannerisms should not be copied by one another as a little sister trying to copy 'big' sister.

And, at first, that's what I believed *IAsfm* was trying to do. It appeared that *IAsfms'* entire format was changed to look like *Analog's*: the "Profile" was added, the columns were changed, and the letters section shortened. I held my breath as I waited for the stories to incorporate a hard-core scientific stance. They didn't change—for which I thank God, and the editor. After the shock of these changes passed, I realized that these little improvements did not change the heart of the magazine—instead they made it better. Keep up the good work!

Janice King.
Sauquoit, NY

*I could have told you that was how it would be, if you had asked me.* —*Isaac Asimov*

Dear Dr. Asimov:

Re: your response to T. J. Hoffman's letter in September 1982 *IAsfm*—"I have tried to solve the matter myself by never using units for weight and dealing with mass exclusively: cowardly evasion, I admit."

When you applied for a driver's license, how many slugs did you mass? Does your local supermarket sell coffee, sugar, flour, etc. by the slug?

I understand the point in Mr. Hoffman's letter, but I think your response was a little quick on the draw.

By the way, do you have as much fun writing your editorials as you seem to?

John Connelly
Rising Sun, MD

*I assumed you would realize that I was referring to my science writing and not to my dealings with the local supermarket. (Always spell it out, Isaac, always spell it out!)*

—*Isaac Asimov*

Dear *Everyone!* (That's fair isn't it?):

I love *IAsfm*. Once a month you save my sanity with excellent reading material at an affordable price! Psychiatrists are much more expensive and rather dull by com-



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parison.

I save every copy. My daughter's four, and I've started her out on "Space Cat" (family tradition), but give me a few years and she'll be reading *IAsfm*, too. Why not? It can't stunt her growth—it'll only expand it.

I truly enjoyed "The Fire Is Lit." When I first started reading it I felt the ghost of *Dragon's Egg* in the air; I'm glad I was wrong. I enjoyed Mr. Brunner's story just as much as *Dragon's Egg*. I can't wait to read the full novel.

I've been out of circulation for awhile so I'd like to know if the Mallworld stories are going to be a full-length book?

Keep up the good work—*you* are indeed such stuff as dreams are made of.

Deby Earl
Salem, Ohio

*Daughters should always start young in learning to appreciate science fiction. Medical research has shown that this encourages thicker and more lustrous hair, a beautiful complexion, and, of course, a higher intelligence.*

*—Isaac Asimov*

To the Editors:

I have just finished the October 1982 issue of your magazine and felt compelled to write, for this issue highlights some of the best and worst aspects of your magazine.

First of all the best: this issue had some of the best stories I have read in your magazine for quite a few months. The best was "Time on My Hands" by Warren Salomon. I had enjoyed the first Ben Hardy, Time Detective story ("Time and Punishment") and am looking forward to more.

"The Coffin Rider" was also an outstanding story. The shorter "Wet Behind the Ears" and "The Pickup" were very entertaining, as were the "On Books", and "Letters" columns and, of course, the Good Doctor's editorial.

I hope that more stories of this quality appear in the future.

Now for the bad news. I had never minded the new covers, in fact, I had liked them a lot. However, October's cover is rather bad; I don't know what it's supposed to be. "The Moon of Advanced Learning" and "The Dim Rumble" were dull (sorry, Doctor, but I really don't care for your George and Azazel stories); "Johnny Beercans" and "Shadows from a Small Template" were just plain bad.

I feel that your "Viewpoint" or "Profile" wastes space that could be used for fiction. And speaking of waste space, what was "Dr. Time" supposed to be? Was it supposed to be funny? Was it supposed to be *science fiction*?

I have gone into this issue with such detail because I enjoyed this issue more than I had any for a long time; but it still had its faults. I hope that you can correct these.

Christopher Gleason
12209 Tilbury Lne
Bowie, Maryland 20715

*I'm sorry you don't care for my George and Azazel stories, too, but on the other hand, I'm glad someone doesn't like them so that I can show I don't insist on praise. (But wait till the next time I'm in Bowie, kid.)*

*—Isaac Asimov*



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Dear Dr. Asimov,

Have you ever wondered how your readers feel when, in the letter column, you address one or two points only, but leave the major point unanswered? I cannot, of course, presume to speak for all, or even the majority, but I can give my own reaction.

I have often thought that persons who answer letters in this fashion either agree with the original writer but dare not say so for fear of the wrath of the powers-that-pay-the-salary or simply cannot think of a good answer and hope that if the question is ignored, it will go away. I would not be so rude as to ask you if one of the reasons above fits your situation. Perhaps you have another. I merely wished you to know of the impression you are giving one of your not-quite-so-gentle readers. I would not have bothered to write, but I have always found this practice most annoying, and it gives me pain to find it used by a writer whose work I both admire and enjoy.

Ann Nichols
4864 Sioux Avenue
Sierra Vista, AZ 85635

*It is not practical to answer any letter at length in the magazine (I'm sure you can figure out why if you think about space considerations) so I say something in a line or two. I generally pick something light. I'm sorry you want something dull and heavy.*

*—Isaac Asimov*

Dear Editor:

Please send along ms. format/story needs in enclosed SASE.

Have in mind story of utmost doom where Dr. Asimov is only survivor of nuclear holocaust. Goes mad with no one to *explain* things to. Disturbing final scene of Mad Doctor proclaiming Universal Truths in supermarket parking lot. Superintelligent aliens land (attracted by all the commotion), listen for a few minutes and mercifully disintegrate the Doctor. Take all the tomato soup. Eventually end up worshipping it . . . God of Thunder or something like that. Asimov's spirit cries out through time, across space, advising them of their folly.

Sorry Doc. Just kidding, enjoy mag very much.

Fred Zifflemeyer
Calgary, Alberta, Canada

*What an affecting concept! It brought tears to my eyes.*

*—Isaac Asimov*

Dear Sirs,

I'm an 18-year-old member of your readers, and I must say that I enjoy your magazine immensely.

The May 1982 issue of your magazine prompted me to write this letter.

Every story in this issue, I thought, was excellent. Two stood out, though. Mr. Sucharitkul's story "Scarlet Snow" had such vivid, tantalizing imagery and settings as well as characters that the story truly came to life. Mr. Strickland's tale "Payment Deferred" was also very good. The entire theme as well as the sad and ironic ending of the story made it quite memorable.

Well, before I conclude I would like to say that in the rural area



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in which I live the reading of science fiction isn't the most popular pastime. But your magazine gives me something to look forward to each month. It's a ray of wonderment in the miasma of local, mundane literature.

Jeffrey Martin
Woodhull, NY

*That's why it's rural. The reading of science fiction leads to rapid economic advance and a rise in the average standard of living.*

*—Isaac Asimov*

Gentlefolk:

When *IAsfm* first came out and I saw a copy, I thought "Oh, *no*—how could Asimov let his name be *sold* like that?" Thinking nasty thoughts but still buying a copy, I'm delighted to say after all these years of reading it, I'm glad my first instincts were wrong. The magazine has lived up to the Good Doctor's name and Beyond.

Having just absorbed the July and August issues, I'd like to thank and congratulate Connie Willis for "A Letter From the Clearys" and long-missing Spider Robinson for "Not Fade Away." Excellent! I'd also like to congratulate, applaud, and laugh gleefully at Robert F. Young's contribution "Universes." For all the talk of Fitzgerald, it seemed more in the style of Hemingway and Richard Brautigan. I'd also like to compliment the new full-bleed cover and the rather bizarre "Mooney's Module." "Profile" may take some time, and I'll give it, though Harry Harrison seemed to be full of sour grapes or worse. I did agree with some of his "lack of liberalism" comments, however.

And one more thing: I've heard time and again Dr. Asimov's comments on one Shawna McCarthy, i.e. good-looks, good-mind, ornery mouth and so on. But Doctor! You neglected a very important part of my fantasies (or, alas, perhaps *I* missed it!) . . .

Shawna, are you *married???*

Ken Fields, Jr.
New Richmond, OH

*Shawna is* not *married, and I have told her any number of times that she must consider herself bound to the very grave to the magazine, but she mutters something about her nights being her own. I don't know what she means by that.*

*—Isaac Asimov*

## NEXT ISSUE

In the March *IAsfm* Profile Joanna Russ will discuss the lot of the woman science fiction writer. We're sure you'll find it a thoughtful and provoking interview. We'll also feature a new, long-overdue, work from Robert Sheckley, "Dramocles," as well as lots of short stories. You won't want to miss a new puzzle by Martin Gardner on the continuing adventures of Lieutenant Flarp and the spaceship Bagel, another fine crossword puzzle by Merl Reagle, and of course Gerry Mooney's "Mooney's Module." Pick up your copy, on sale February 15, 1983.

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# SF CONVENTIONAL CALENDAR

_ by Erwin S. Strauss

The Spring con(vention) season is almost upon us, so this is the time to plan for this year's social weekends with your favorite SF authors, editors, artists and fellow fans. For a longer, later list, an explanation of cons, and a sample of SF folksongs, send me an SASE (addressed, stamped envelope) at 9850 Fairfax Sq. #232, Fairfax VA 22031. (703) 273–6111 is the hot line. If a machine answers, leave your area code and number. I'll call back on my nickel. Send a #10 SASE when writing cons. When calling cons, give your name and reason for calling right away. Look for me at cons behind the Filthy Pierre badge.

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4–6—**VikingCon**. For info, write: % **SF&F Club, W. Washington U., Bellingham WA 98225. (206) 676–3000** (9 am to 5 pm only—call me and other cons 10 am to 10 pm—never collect). Con will be held in: Bellingham WA (if city omitted, same as in address) at the University. Guests will include: (none announced yet). Space-related activities, masquerade, an "Altair Cantina."

4–6—**OmniCon, Box 970308, Miami FL 33197**. Ft. Lauderdale, Oceanside Holiday Inn. Fan Bjo Trimble, Dave (Lensman) Kyle, Peter Davison, artist Michael Whelan, R. ("Mythconceptions") Asprin.

11–13—**TallyCon, % Crusoe, 213 Great Lakes Rd., Tallahassee FL 32301.** Gordon R. (Dorsai) Dickson, Kelly & Polly Freas. At the Holiday Inn. Here's another chance to go south to escape Winter.

18–20—**Boskone, % NESFA, Box G, MIT PO, Cambridge MA 02139.** The biggest SF con on the East Coast.

18–21—**AquaCon, Box 2011, Reseda CA 91335**. Los Angeles CA Jeanne ("Stardance") Robinson, Spider ("Callahan's Crosstime Saloon") Robinson, fan Karen Willson. Another February sunbelt con.

18–21—**ConstellationCon, Box 15–805, Cecil Blogg Dr., Victoria BC V9C 3H8 Canada.** Damon Knight, Kate Wilhelm, Bjo Trimble, Jerry Pournelle & Larry Niven ("Oath of Fealty"), Syd Mead. No connection with the WorldCon in Baltimore later. At the Empress & Harbor Towers Hotels.

## MARCH, 1983

4–6—**UpperSouthClave, % ConCave, 512 E. 12th, Bowling Green KY 42101.** Park City (resort) KY.

11–13—**CoastCon, Box 1423, Biloxi MS 39533.** A last excuse to flee the Winter by going south.

11–13—**WichaCon, 211 N. Oliver, Wichita KS 67208.** W. A. (Bob) Tucker, Gordon Garb, Stan Nevins.

18–20—**LunaCon, Box 149, Brooklyn NY 11204.** Hasbrouck Heights NJ (near New York NY). McCaffrey.

24–27—**AggieCon, Box J-1, College Station TX 77844. (713) 845–1515.** Harry (Stainless Steel Rat) Harrison, Michael Whelan, W. A. (Bob) Tucker, Stephen Donaldson.

24–27—**NorWesCon, Box 24207, Seattle WA 98124. (206) 723–2101.** Usually lots of writers come here.

## APRIL, 1983

1–3—**BaltiCon, Box 686, Baltimore MD 21203.** Only 1500 admitted (vs. 1982's 3000). Join now for $12.

## SEPTEMBER, 1983

1–5—**ConStellation, Box 1046, Baltimore MD 21203.** John (Zanzibar) Brunner, David (Lensman) Kyle, Jack (Well of Souls) Chalker. The 1983 WorldCon. Go to smaller cons if you can to prepare. Join for only $10 to vote on Hugo (Like Oscar) awards, get publications, without attending.

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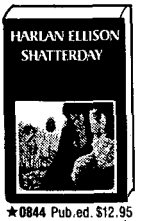


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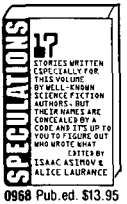
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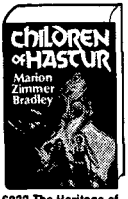


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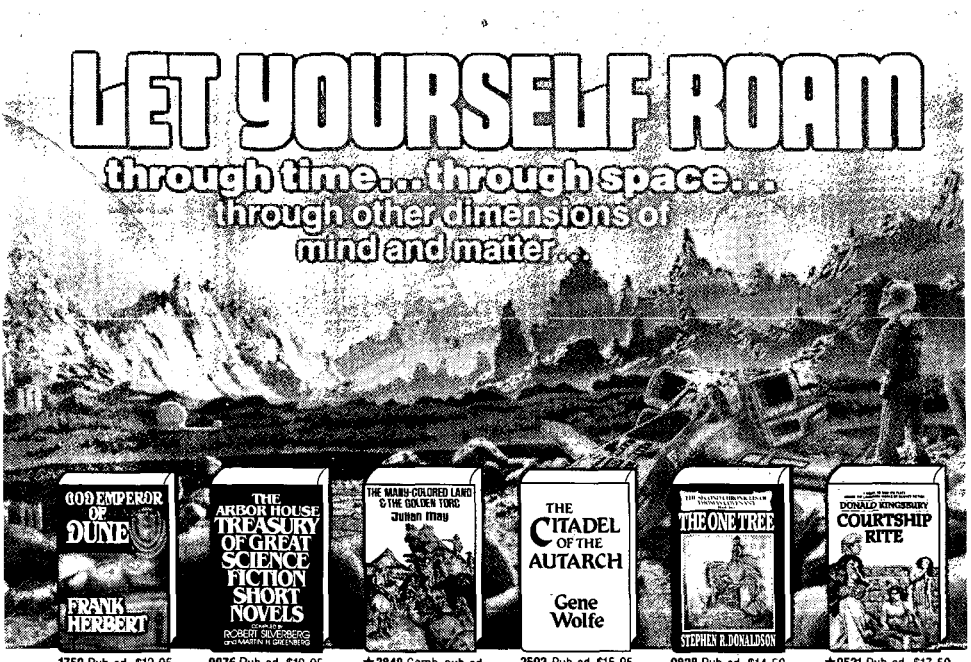


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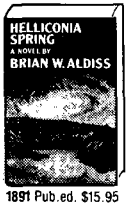


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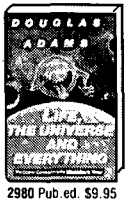


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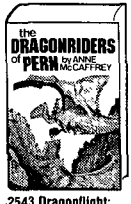


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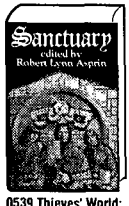


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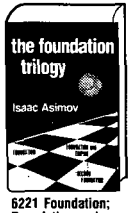


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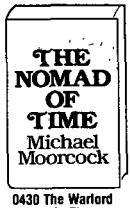


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